Studies in The History of Ideas

Volume II

COLUMBIA UNIVERSITY PRESS
COLUMBIA UNIVERSITY
NEW YORK

FOREIGN AGENTS
HUMPHREY MILFORD
AMEN CORNER, E.C.
LONDON
EDWARD EVANS & SONS, LTD.
30 NORTH SZECHUEN ROAD
SHANGHAI

UNIVERSITY

College of the Pacific
Stockton, Calif.

STUDIES IN THE HISTORY OF IDEAS

EDITED BY

THE DEPARTMENT OF PHILOSOPHY
OF COLUMBIA UNIVERSITY

VOLUME II

New York
COLUMBIA UNIVERSITY PRESS
1925

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Printed from type. Published February, 1925

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PREFATORY NOTE

In 1918 there appeared under the same title which the present work bears a volume of studies in the history of philosophy expressing "the desire of those who are or have been identified with work in philosophy at Columbia to encourage research and the exercise of historical imagination, and to contribute something to the work being done in this department of human interest." The present volume marks a continuation of that endeavor.

The contributors to this volume either are or have been members of the Department of Philosophy of Columbia University. Professor Balz is now of the University of Virginia, and Professors McClure and Lamprecht of the University of Illinois; the other contributors are at Columbia.

The editors wish to express their obligation to the editors of the *Revue de Métaphysique et de Morale* for their kind permission to translate and reprint the article which appears as a Supplement to this volume.

The Editors

THE "SOCRATIC DIALOGUES" OF PLATO

JOHN DEWEY

THE "SOCRATIC DIALOGUES" OF PLATO[1]

JOHN DEWEY

Every student of Plato knows what advance has been made in interpreting many of the dialogues of Plato, notably Euthydemus, Theaetetus, etc., by detection of contemporary schools of philosophy, especially the Cynics, Cyrenaics and Megarics, figuring under the guise of sophists of a by-gone generation. But interpreters who employ this idea as a matter of course for dialogues from the "middle period" on, still cling piously to the idea of a genuinely Socratic early period. They hold that the themes and general tenor of the Lesser Hippias, Laches, Lysis, Charmides, etc., are genuinely Socratic, even when they are not claimed to be literal reports. This is an extraordinary tribute to Plato's dramatic power. But in my judgment it leaves us without the key to understanding these early dialogues, and also without a clew to their relation to the later dialogues. It is worth while to adopt a contrary hypothesis and proceed in a reverse direction. We may assume that while the dialogues are indubitably early ones, they are aimed at rival thinkers

[1] The purpose of this paper is to present a point of view for interpreting the Platonic dialogues rather than to develop that point of view into an adequate piece of scholarly research. This fact accounts for the absence of references to important literature. One reference must be made, however, that to Karl Joel's articles on *Der* λόγος Σωκράτικος in the *Archiv fuer Geschichte der Philosophie*, Vol. VIII, p. 466, and Vol. IX, p. 50, 1895-6. These articles are the source of the method used in this paper, and have guided me in reading Plato since I became acquainted with them. I acknowledge also indebtedness to Benn for the conviction that the sophists were divided into two schools, one naturalistic and the other humanistic and that this division accounts for the form which many problems assume in Plato.

who claimed to be true Socratics. They are intended to show that the views which these rival thinkers advance are full of confusion and contradictions. The joke, so transparently clear to Plato's own audience, is heightened by putting the confutation in the mouth of Socrates himself. He ironically shows that the views derived from him are not capable of maintaining themselves against an elementary examination.

The purpose of the dialogues, however, is not just to ridicule Plato's rivals in philosophy. It is also to bring out the nature of certain problems and to define them in such a way as to prepare for a constructive treatment. It goes without saying that Plato was intensely sensitive to the ideas and problems of other thinkers. He advanced in his own development by mastering and absorbing the thoughts of others. It was almost inevitable that there should be an early period in which he was chewing upon the systems of rival schools, when he felt that he had a grasp on their problems, on the elements of truth in them, and on the points where they went wrong, and when he was more concerned to confute them as systems and elicit their problematic factors than to offer his independent solutions. My hypothesis is that this phase of his development constitutes the so-called Socratic period.

Before entering upon a detailed discussion we may consider some antecedent probabilities. In the first place, there is the bare fact of the rival groups in Athens, a number of them taking the name of Socrates, while others like the literary-rhetorical group attacked all philosophers. Also we know that dialogues centering about the figure of Socrates, were a common mode of literary composition, the rhetoricians attacking Socrates, the philosophers replying and putting him in a good light, and also attacking one another if not by name then by masked indentifications

easily penetrated. The probability that Plato reserved the expression of his antagonism to the Megarics, to Antisthenes, etc., to a comparatively late period, that his dramatic and competitive spirit did not fasten upon his contemporaries from the start, seems slight. Those who conceive that in early youth Plato's arrogant and self-assured spirit humbly devoted itself to his master and to thinkers of a by-gone age, and wrote dialogues intended (as even Gomperz holds) merely to show the dialectic superiority of Socrates to the men of Socrates' own time, do not seem to observe ordinary psychological canons. They make no effort to recover the contemporary scene.

Philosophical rivalry was also bound up with political factionalism. The aristocratic connections of Plato made him a ready mark for the gibes of the "democratic" Cynic school. Moreover he was "state-minded," while the Cynics were anti-political. And while the Cyrenaics preached accommodation to society and utilization of all its benefits, they also preached that the wise man would abstain from active political participation, while the Plato who later taught that philosophers should be rulers can hardly have been innocent of political bias in his early period. In view of Socrates' own abstention from political life, it is evident that the other "Socratics" had a *prima-facie* case against Plato with respect to their genuine discipleship, and that Plato would have to devise a plausible reason to account for Socrates' practical deviation from the theories he attributed to him. When Plato became interested in the physical speculations of the Pre-Socratics he suffered from a similar embarrassment, a liability to attack as not a true Socratic, which the Cynics at least would force home to him.

Every reader of Plato knows how much of obscurity and confusion is found in his choice of topics, in the sequence of problems and arguments, in the peculiar turns given to

the arguments, and how frequently obvious sophisms are attributed to Socrates. He knows also to what little avail commentators have wrestled with these difficulties. It seems likely that if we had as full records of the other schools of his day as we have of Plato's own writings, we should be in possession of the key, and that until further manuscripts are discovered we shall be at a loss. Upon the whole it seems less hazardous to use Plato to piece out the reconstruction of other thinkers of his day than it is to interpret Plato while ignoring them. At least we can adopt the hypothesis that when somebody in a dialogue seriously presents a view which is criticized by Socrates we have an echo of some teaching of some contemporary school. The allusion may be quite direct, so that any cultivated person in Athens could immediately locate its bearing. It may be indirect, a generalized reference to some doctrine that had given Plato pause, and by wrestling with which he had advanced a stage in his own thought. Today in reading James, Royce and Santayana any careful reader can find a multitude of such indirect and perhaps often subconscious cross-references; a common intellectual background of Harvard is presupposed. And any scheme of philosophical interpretation is inept which forgets that every thinker thinks against as well as with the views of his contemporaries and associates. It is especially inept when applied to the Athenian temperament and social conditions. Today we write direct criticism, naming our antagonist. The urbane, competitive, dramatic, prestige-seeking Greek adopted a veiled method.

Coming more closely to the contents of the early dialogues, we are met by the well known fact that in each dialogue Socrates subjects to hostile criticism views which are Socratic in tenor, views, moreover, which he himself accepts in the dialogue, while deploring his inability to

establish them satisfactorily, and which afterwards reappear, in modified and deepened form, in Plato's constructive dialogues. The interpreters who claim that these dialogues are Socratic are full of ingenious explanations of why Socrates attacks his own doctrines. Jowett is hardly to be cited for philosophical acumen, but his naiveté makes him worth quoting. Of the Charmides he says "we see with surprise that Plato, who in his other writings identifies good and knowledge, here opposes them;" of the Lysis that "Socrates has allowed himself to be carried away by a sort of eristic or illogical logic;" of the Laches that the knowledge which is identified with virtue is "here lost in an unmeaning and transcendental conception;" of the Protagoras that the truth advanced by Socrates "is paradoxical or transcendental." And yet Jowett rests sure in the faith that all these dialogues in spite of their transcendental and dialectic character belong genuinely to the homely, practical Socrates! It surely would be much simpler to hold that the "Socratic" views and methods which are criticized are those of men pretending to speak in Socrates' name, which Plato then ridicules in the name of Socrates himself, involving them in obscurity.

More specifically the main theme of these earlier dialogues is the relation of knowledge, virtue and the good. Secondary but derived topics are the unity and plurality of virtues, and the teachability of virtue; that is, knowledge and virtue in process of becoming. It is incredible that Plato would have represented Socrates questioning his own thesis, the connection of virtue and knowledge, and of both as means to an end of benefit or good, unless there had arisen conceptions of knowledge, virtue and good which Plato was interested in criticizing and repudiating. In the Lesser Hippias, Socrates *from certain premisses* drives the argument to the conclusion that only the good man

can do injustice involuntarily. The premisses have a specious Socratic coloring in the analogy of moral knowledge and virtue with the knowledge and skill of artisans. But when Hippias says he cannot accept the conclusion, Socrates says "Neither can I." No wonder many have rejected the authenticity of the dialogue when it seems to end in a *reductio ad absurdum* of a genuine Socratic doctrine. But the case stands otherwise if what is criticized is the *Antisthenean* interpretation of Socratic knowledge and skill. Of Antisthenes at least this much is known. He began as a rhetorician and literary interpreter, especially of Homer. After becoming acquainted with Socrates late in life, he expounded, by means of allegorical symbolism, Homer as a teacher of Socratic morals. He preached return to nature along with the necessity of strict discipline of the passions and desires, in order that man may be free or self-possessed and self-sufficient. He opposed institutions, especially political ones, to nature on the ground that they were either conventional or arbitrary. Governments taught injustice, deceit, intrigue and introduced luxury and corruption. Aside from the poets — allegorically understood — the artisans are those who have knowledge. They know their business, their material, their objects. Their art is skill, virtue. They obtain it by discipline, by practice, based on natural aptitudes. Among the arts some are false since they are concerned with luxuries, others natural, because dealing with and meeting the necessities of nature, food, shelter and clothing. The truly independent soul will unite as many of these arts as possible in himself so as to be free. This self-sufficiency is good or happiness.

In this account appears a genuine Socratic element, but interpreted in a way which differs radically from that of Plato. We note especially the exaltation of practice over

logical and theoretical science as means of attaining virtue, and the attack not merely on existing institutions but on the political state as such. In the former point, Antisthenes was influenced by the Megaric dialectic, except that instead of using it to deny plurality and establish the unity of good, being and truth, dialectic was regarded as merely of negative use, to refute others who connect true knowledge with the use of a logical method. We know from other dialogues that Plato's standing term for the Cynics was uncultivated, uneducated, which by the time of Aristotle had become a technical name for all who denied the value of logical method. Upon the political side, we know the pains which Plato took to show that knowledge, in the form of correct opinion of death and other things which arouse fear, can be generated and maintained only in an organized state which is ruled by the truly wise.

The trend of the dialogue is now obvious. Hippias appears as a rhetorician. His theme is Homer. He is the master of all arts, and self-sufficient. Then it is shown that the man who is the master of an art is just the one who is able to deceive others, and the artist or craftsman who can deceive others voluntarily is better than the one who deceives accidentally. The analogy is then extended to objects, artificial ones, like rudders, bows, natural ones like the eye. Then it is shown of the soul also as a tool or organ having a function. Hence the wise in anything, who in Socratic fashion, is defined as virtuous and hence able to produce good or benefit, is also the one who can produce at will either good or evil; the capable soul is the one who can do injustice voluntarily and the only one who can.

The conclusion is irresistible, given the premisses. But we recall that Plato's great contribution to discussion, the one he borrows from geometry and prides himself upon

contributing to philosophy, is that all such premisses are hypotheses, defining problems, and that the value of the conclusion consists in its explication of the meaning of the premisses. The premiss here is the Cynic identification of knowledge and virtue with the wisdom and skill of the artisan. Absurdity results because this view is carried over to moral virtues. The reason for the absurdity is clearly indicated. What is true of relative ends, ends that ultimately are only means, has been assumed to be true of real or absolute ends, the goods of the soul. As is so often pointed out in other dialogues, the physician knows what health is and how to attain it. The good of health, or whether it would be better to die, he does not and cannot, as physician, know. A supreme science, a science of Good and ends in themselves is thus clearly indicated, and the absence of it is shown to be the weakness of Hippias as a representative of a rival school.[2] The one who knows this ultimate good cannot possibly act unjustly either voluntarily or involuntarily.

In the Laches, reference to distinctive schools is highly indirect, but reference to the problem which divided the schools is obvious. Laches is a conservative, opposed to all philosophizing, but a Spartanizer, and as such attached to exercise and practise as the means of attaining virtue, and also a strong believer in original natural aptitudes. He is, so to speak, a Cynic without knowing it. Nicias, on the contrary, is a lover of culture and philosophic discussion; he is a humanist. He introduces his conception of the virtue of courage as connected with wisdom as something he had heard from Socrates — a sufficient warning to the wise. He expressly denies that the knowledge of specialists or artisans is the kind of wisdom searched for. He

2 Cf. *The Republic*, 505, that if we knew everything else perfectly but did not know the essential form of the good it would not profit us.

also denies that *natural* courage, lacking forethought, is in any sense a virtue. He points to the need of a theoretical knowledge of grounds of things to be feared, a knowledge different in kind from that of the artisan. Like Plato he is a critic of Cynic morals. Yet Plato criticizes him.

The thing which stands out is that if the difficulty is to be overcome, there must be different kinds or degrees of knowledge and hence of virtues. Nicias is impaled on a dilemma. Without knowledge, there is no courage; there must be knowledge of danger, of threatening evil. But with perfect knowledge, there would be complete knowledge of evil and of good, hence no fear, but only prudence, and hence no possibility of courage. Nothing could point more clearly to the need of some genuine knowledge which although genuine is less than wisdom. In the Meno as well as in the Theaetetus, right opinion is introduced, and right opinion exactly answers the difficulty for both courage and temperance. The exact definitions are given in the Republic, where courage is defined as opinion, not perfect knowledge, an opinion about the things which should and should not be feared based upon the laws of the state as formulated by the truly wise. The opinion is embodied in custom by the latter. The problems of the unity and plurality of virtues and of the teachability of virtue are thus both solved.[3]

It is strange that Plato's negative dialectic should have persuaded so many of his interpreters against Plato's own

3 It will be recalled that the Protagoras ends with a reversal of the original positions, Socrates finally holding that virtue is teachable under certain conditions. Protagoras had treated citizens as they happen to exist in present states as its teachers. The discussion apparently switches to the problem of the unity and plurality of virtues — to the perplexity of many commentators. But the solution of one question is the solution of the other. In a state ruled by the wise, the unity of knowledge and of virtue maintained by the wise renders possible right opinion, a plurality of virtues and the teachability of virtues — all in the realm of generation — for the many.

express teachings, that he held to an exclusive unity of virtue, and to a denial of the need of practise or habit in attaining and maintaining virtue. The fault is perhaps Aristotle's, because of his charge that Plato ignored the necessity of practise to safeguard man from the seductions of the passions. But the view is contrary to fact. Temperance and courage involve knowledge; but since they exist in the realm of change and therefore in that of practical art, they demand skill acquired through exercise and formed into habit. The too common refusal in spite of the Republic to recognize Plato's own position is largely connected with the interpretation of the early ethical dialogues as Socratic. Regard them as dialectic refutations of thinkers claiming to be Socratic, and their positions are not only consistent with the teachings of the Republic but state the problems whose solutions are there given. If Nicias had perceived that, given knowledge of ends and goods which do not change, a virtue and knowledge become possible which are attained by *practise under the direction of the truly wise*, he would have escaped the dilemma. But Nicias stands where the Cyrenaics stood. He is Socratic enough to proclaim the importance of knowledge for virtue. He does not, as Plato does, see that knowledge, even in the form of right opinion as to things which change such as pleasures and pains, depends upon insight into Being — that which does not change.

The discussion of *sophrosyne* in the Charmides is complementary, though considerably more complicated. It is to be noted that the figures of the dialogue are Plato's friends and relatives and that the atmosphere is a friendly non-controversial one; while at the same time the arguments, as far as Critias is concerned, are quite formal and turn on highly technical points, such as the existence and meaning of self-relation, the difference between knowl-

edge *that* we know and *what* we know; between specific particular knowledge and abstract universal knowledge. The dialogue also distinguishes carefully the meaning of terms, and the distinction is serious although there is some humor about Prodicus as their real author. It seems to me that only a paucity of historic imagination can attribute such themes to the historic Socrates, especially as they are just the technical distinctions with which Plato positively occupies himself.

The point upon which Critias is finally tripped gives the key to the problem of the dialogue and to its reserved solution, if not quite clearly to the philosophical school masked by Critias. The latter has set up a science of sciences as the wisdom which gives the virtue of sophrosyne. The science of the good is expressly *subordinated* by him to this science. In prior discussion in the dialogue it has been shown that it is the special sciences which give special goods, like health, etc., and that a science of science is of no avail in obtaining them, and that the only science which is of final use is the science of the good itself. Thus the argument of Critias has been going in a circle. Not the life according to knowledge makes men act rightly and be happy, even if all sciences be included, but the life according to only *one* science, *that of good and evil.* Here is an obvious hint, expanded to the full doctrine of the Republic, that the science of the Good is the ultimate science, not a subordinate one, and that knowledge of knowledge (that is, logic) is subordinated to it, not *vice-versa.*[4]

4 The correspondence with the Republic 505, is almost point for point. The multitude call pleasure the good, but even those whose "*definition* identifies pleasure and the good are forced to admit the existence of evil (harmful) pleasures." The more enlightened call the good *phronesis.* "And you are aware, my friend, that the advocates of the latter opinion are unable to explain what they mean by insight, and are compelled at last to explain it as insight into the good, and are in a ridiculous difficulty." The reference to some well-known philosophic doctrine and to a well-known criticism of it

The dialogue does not lack for other hints. Socrates after rejecting the idea that the wisdom which gives virtue is identical with a knowledge of the nature of knowledge, quite gratuitously remarks that such a knowledge would be useful to the *learner*, making learning easier, clearer and also enabling him whenever he has any knowledge to test the knowledge of others; and that the trouble has been that we have been seeking from knowledge of knowledge (or logic), something more than it can yield. Still earlier after criticizing the doctrine of self-relation (which is obviously akin to an undoubted later Platonic notion) he contents himself by saying that in some cases it is inadmissible, namely in number, as that is relativistically defined, while with respect to other things a "great man" is needed to determine whether an absolute, or self-related exists, and how wisdom is connected with it.

The reference here to number and computation is surely ironical and the irony is part of the confutation of Critias. Plato had no false modesty in thinking himself the great man who could solve the problem of the self-related! and in other dialogues he expressly denies the relative character of number. Since a half is also a double (with respect to something else) mathematics cannot be a science of relatives of this sort. (See Phaedo, 101, and Republic, 438, 439 and 479.) Critias after defining number as required for a proper utiliatarian computation of the good as relative and then arguing from it to a self-related — knowledge of knowledge — is guilty of self-contradiction.

is unmistakable. Of course, critics have recognized the similarity to the argument and conclusion of Laches, but holding that the latter is genuinely Socratic have been much puzzled to explain it. But in fact we have here the explicit assertion of a supreme science of objective good which is negatively indicated in Laches as the key to any true knowledge of knowledge, and as a superior knowledge and virtue. Compare also Republic 509, where it is expressly said that knowledge *resembles* the Good but *is* not (the) good absolutely or without qualification.

The popular notion that the Cyrenaics identified virtue with pleasure as well as pleasure with the good is absurd. They identified virtue with knowledge of the greater pleasure; this can be attained only by computation or calculation. A sensation of pleasure may have been regarded as the most certain knowledge of good, but this kind of knowledge, taken by itself, could hardly be the kind of knowledge which gives skill, art, virtue. Discrimination of lesser from greater pleasures, or knowledge of knowledge, is required. From independent sources we know that the Aristippeans esteemed dialectic as a tool and that, although they were humanists rather than naturalists, they prized knowledge of nature so far as that conduced to human welfare — a motive which finally drew them to the atomists for their cosmology, and which finds its final expression in Lucretius. As compared with the Cynics, Plato regarded them as "refined." [5]

Even if Protagoras be not classed as a "Socratic" dialogue, (it certainly belongs in the same group as those just considered) it is worth turning aside a moment from the Charmides to note the similarity of atmosphere. The Protagoras of the dialogue called by that name is less obviously a caricature, or mask, than he appears in the Theaetetus. But he is equally Cyrenaic in temper. In accord with his usual method of reasoning from premisses hypothetically adopted, Socrates starts with the identification of good and pleasure. The argument then shows that pleasures differ in quantity, and hence measurement is required — compare the computation of Charmides. Hence knowledge of measurement stands higher than pleasure. The science of number and measure is explicitly reserved for later discussion. Note also that even in the Protagoras, the concept of number as relative is not ques-

5 See Theaetetus, 156; Philebus, 53.

tioned; that is, Plato admits a discussion in terms of greater and less. Of course it may be contended that Plato at this period had not himself advanced beyond this notion, and that it was only later that, by realizing the absolute nature of number, he succeeded in straightening himself out on the topic of pleasure and its connections with knowledge and with good. But if we adopt the hypothesis, not violent in the case of a mathematician, that Plato already had his insight as regards number, we find everything dovetailing with remarkable precision. Pleasures are relative, in the realm of becoming. As such they are greater and less. A hedonist, one who does not rise above the plane of generation, must then, if he is Socratic at all in retaining an identification of knowledge and virtue, define virtue as knowledge of greater and less. Thereby he lets in calculation and measurement as superior pleasure. Submit number and measure to examination, and they are found to take us into the region of the self-related or absolute — out of generation into being. The dialectic is perfect.

A point in the earlier part of the Protagoras is worth notice with respect to the Laches and Charmides. When courage comes under discussion, Protagoras takes a depreciative view of it; it is not like other virtues; it is a mere gift of nature. But Socrates controverts him by showing that an element of knowledge is required if courage is a virtue, and thus affiliates it to the other virtues. To the Cyrenaic, military courage must have been a barbarous virtue, fit for animals, wildmen, soldiers, and Cynics and others living according to nature. Civilized, cultivated human beings living by art and friendship have no call for it save as they lapse into a state of nature. Notice the humanistic element in the assertion that "The worst of men in a civilized state are better than savages who have no education nor courts and laws," and contrast this view

with the view of the Cynics that laws and states are devices of the powerful to advance their own interests. Recall also that the end of philosophy to the Cyrenaics was to enable its adepts to live without laws as other men lived because of laws. The temper of Protagoras is everywhere that of the Cyrenaics: an appreciation of the value of human arts, specially social arts, as the source of all cultivation and truly human delights, together with a condescending tolerance toward the masses who have to live by custom because they have not risen to the plane of insight, *phronesis*, and of whole-mindedness in estimating pleasures. We should at least glance also at the discussion of fearlessness of soul which the wise man displays in the face of thought of death and other evils.

Protagoras, like the Cyrenaics, is a humanist, not a naturalist. He solves the question of the teaching of virtues by a glorification of the social in humane arts. The art of government is the bond of society. Zeus tells Hermes not to distribute the social arts as technical crafts are distributed — to the experts or few, but to all, since otherwise states cannot exist. All have some share in reverence, justice and wisdom. The social order is the great teacher of the virtues. The doctrine is precisely that of the Republic — with a difference. The *existing* state teaches vice rather than virtue; it is the great sophist, the corrupter of men's affections and opinions. Introduce into the state a class of men who really know and give them control of the laws — the ultimate educators of men — and the humanistic ideal becomes a reality. But it is impossible to secure the needed class of wise men without training in dialectic, mathematics and understanding of nature. Thus Plato develops his synthesis of the motifs which were scattered and disjoined among contemporary schools. The "Socratic" dialogues are the critical preparatory try-outs.

We have, however, too long turned aside from the Charmides. Note the conclusive reason for rejecting the knowledge of knowledge as the true wisdom. Nicias has appealed to the arts, especially the non-mechanical arts — the latter being the stronghold of the Cynics. But it is clear that the physician judges and is judged by his knowledge of health, not by his knowledge of knowledge.[6] To know health we should have to have the special knowledge which the physician has. Now we know from a multitude of other passages in Plato that while we can trust the physician, the carpenter, the competent artist and artisan in any sphere, to know his own subject-matter and how to attain it, he does not know the end of his own end, the good of his good. That is, the physician does not know when or why health is really a good to his patient. He does not know of the limits of his own knowledge.[7] Hence the need of another kind of wisdom, that of the man who knows goods that are always goods and who can judge special goods in the light of his knowledge of real and final good — the philosopher as Plato conceived him. Place knowledge of the good above knowledge of knowledge — which then becomes dialectic based on mathematics — and the whole argument becomes as clear in its positive implications as it is in its negative criticisms. Knowledge of the real good will enable us to utilize the physician's

6 The reader's attention is again invited to the "unmeaning and transcendental" nature of this concept of knowledge of knowledge on the basis of the ordinary interpretation. Where does it come from? Why is it introduced? What does it mean? Identify primary knowledge with the experience of pleasure, and knowledge of knowledge with the estimate of present pleasures in respect to future pleasures, and knowledge of knowledge gets a definite significance and historic context. Its quick conversion into knowledge of self also becomes something more than a vicious dialectic pun.

7 That is the objection to democracy, to the rule of mechanics etc. Within their own affairs they trust the expert, the "one" — him who knows. But in public affairs which are concerned with more ultimate good, each claims knowledge for himself, and establishes judgment and rule by the many incompetent.

knowledge, without having to descend to becoming physicians ourselves, and to fix and test its limits. That Socrates could carry a discussion as near as this to Plato's own most characteristic ethical idea without knowing what he was doing and where he was going may be asserted, but it puts a strain on credulity.

The previous argument has assumed a kinship of Critias to the Cyrenaic school. But we hardly know with sufficient certainty when the affiliation of Cyrenaic humanism with atomistic naturalism began, though we know that the alliance finally became firmly established. If we can assume that the alliance was already under way when Plato wrote, the context of the dialogue becomes clearer. It was pleasures of mind which the Cyrenaics arrived at as a consequence of their comparison of pleasures, that and pleasures of friendship. Moreover natural science was at least a pleasure of mind even if intrinsically of slight importance as compared with knowledge of the humane arts. Also it was a bulwark against the fears and pains bound up with superstitions about death and the gods. If we turn to Democritus we know that he was ethically a hedonist, and that he held that only a man who was wise — defined as insight into natural causes — could discriminate among pleasures, and judge pleasures and pains truly. Admit the Democritean contention of the connection of virtue with knowledge and its hedonistic aim, and the supreme virtue becomes discretion, discernment, sophrosyne. It yields self-control as its immediate fruit.

Critias shows no obvious signs of the atomists' interest in knowledge of nature. He stands nearer the Cyrenaics than to the atomists. But there must have been an approximation from both sides with respect to their common ethical ground, pleasure and the good. A person starting from the school of Socrates with the identification of virtue

with knowledge of present pleasure in terms of causes and remote pleasures, and identifying the good with pleasure, would have met halfway a Democritean who started with atoms and ended with ability to discriminate among pleasures and pains on the basis of knowledge of their natural causes. The two would differ only in emphasis.

It is noteworthy that when Plato permits Socrates to drop his playful badgering, Socrates twice admits that such a knowledge of knowledge as Critias has in mind would insure order and happiness. Each man would act according to his own science, and no man professing an art, whether military affairs, medicine, or government, would be able to impose upon others. Prediction of the future would come under the control of the man who understands the causes which produce things in past, present, and future alike. So far would discrimination of what we know and do not know reach. The household and state would be well-ordered and happiness would reign.

Analogy with the Republic lies on the face. The discussion passes over from the innocent Charmides to Critias when virtue is defined as doing one's business, and doing is expressly contrasted with making — the business of artisans. It is connected with doing worthy deeds. The general likeness to the Republic is obvious. Most important is the passage in the Republic, 443, where justice is identified with an inward doing, and temperance — the virtue under discussion in the Charmides — with the resulting inward harmony which also secures self-mastery. Critias was, so to speak, all right up to a certain point. His trouble was that he identified the highest virtue or knowledge with knowledge of knowledge instead of with knowledge of the real and permanent end or good. He then had no criterion left, except the criterion of the crafts which he repudiates, to judge the proper work, doing, business,

of the different parts of the soul. The passage with its reference to putting a house in order should be compared with Charmides, 171. Note also in the context, Republic 444, the likening of justice to health in that both imply that the powers of body and soul are arranged so that they "master and are mastered by one another in accord with nature."

The importance attached to ability to distinguish between real knowledge and false and conventional belief is as Democritean as it is Platonic. Plato here criticizes the notion that this ability can be had by means of knowledge of knowledge. It can be had only by knowledge of ends or goods in themselves. Self-knowledge is indeed fundamentally important. It consitutes sophrosyne; it is manifested in ability to discriminate and measure among pleasures and pains; it is a condition of self-control. So far there is agreement. But Democritus held that this self-knowledge in the form of knowledge of knowledge can be attained by knowledge of natural causes. Plato holds that knowledge of physical causes, being in the realm of generation, is useful, but only when there is first a knowledge of ends which are final. Here is touched upon, at least by indirection, the difference between the two great systems of antiquity.

Our last paragraphs, however, emphasize more than the facts warrant a Democritean element in the views allotted to Critias. It is enough that the position is Cyrenaic with probable atomistic affiliations, which could hardly be stressed with a man of the world like Critias as the leading figure. The dialogue begins with Charmides who defines temperance or sophrosyne as gentleness or quietness or moderation. Is it fanciful to see here an allusion to the well-known Cyreanic identification of true pleasures with gentle motions? Note also the reference to a charm which

brings health, which is connected with treating the part in the light of the whole. The charm came from Thrace; Democritus was a Thracian. Sophrosyne means health of soul. The knowledge of health possessed by the physician is the pivot upon which the argument turns at each critical stage. When at the close the argument is about to come to the conviction that knowledge which ensures virtue and so happiness is knowledge of the good, not knowledge of knowledge, Socrates asks if it is knowledge of health they are in search of, and Critias replies that that is near the truth. Note the contemptuous attitude taken throughout toward practical knowledge of the kind possessed by craftsmen. Note again how the soothsayer's knowledge is introduced. Socrates refers to the knowledge of the future possessed by the prophet as making one happy. Critias interrupts and says, "Yes, but there are others as well as prophets who have such knowledge." Socrates replies, "Yes, those who know the past and present, as well as the future." [8] The passage suggests not only the importance attached by all hedonists to knowing future pleasures and pains in order to control present enjoyments, but also the knowledge of real things, irrespective of time claimed by atomists.

The argument clearly points to a school of aristocratic and cultivated leanings, which identified the highest virtue, art or knowledge with the health of the soul, which held that health of soul is connected with a science of self just as health of body is connected with the physician's science, and that the science of self, or knowledge of knowledge, enables a man and a city to discriminate between true and pretended knowledge in himself and in others, and hence

8 The soothsayer appears in Laches, too. Here he cannot really know future sufferings and ills, because he does not know grounds or causes but only their signs. Hence he does not know whether future pains are really to be feared or not, whether they are evil, even when he "knows" that they are going to happen. Hence he has to be "under" the general, who has a knowledge of the things to be really feared and hoped for.

secures self-control and order. If we substitute for temperance fearlessness of soul — which we know was a prized virtue of the atomists — there are many parallels between the temperance of Critias and the courage of Nicias though Critias occupies a much more advanced plane in dialectics.

The chief difficulty in more specific interpretation lies in the failure of Plato to make reference to atomism specific. This holds of his entire philosophy. His only serious intellectual rival, Democritus, his only rival in breadth and depth, Plato consistently ignores. Although Plato borrowed from him the concept of fixed forms, ideas or schemas, as the sole objects of true knowledge, and although the cleavage between the two systems is the deepest found in philosophy, Plato, so free in his references to other philosophers, never gives a hint of the existence of Democritus. Perhaps the "although" should be changed to "because." At all events, we come here upon the most serious difficulty in the way of a more specific interpretation of Platonic controversial references.

We are struggling today with the ethical problems of Plato's time. We assert rival views more vehemently. But perhaps we consider them less urbanely and with less of lucid intellectual method. The claims of discipline, of culture, of natural science and of an alleged more ultimate knowledge of ends, are still opposed to one another. Past discussion seems to have choked us with its debris rather than enlightened us. We project our mental muddiness and one-sidedness upon the Sophists, and laying our sins upon them fail to recognize that, comparatively speaking, the Sophists were direct and honest and that it is we who are sophisticated. If we cannot get instruction by recurring to the Platonic scene, we may at least discover the charm of free and direct mental play directed to the fundamental themes of life.

THE THEME OF PLATO'S REPUBLIC

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The pleasures of old age, the terror of a sophist, the praises of injustice; the origin of society, the psychology of the soul and a description of Greek education; the nature of justice, marital relations and music; a criticism of art, gymnastics and the consolations of philosophy; the immortality of the soul, Sicilian cooking and social reform:—these are examples of the topics discussed in Plato's *Republic*. And yet the *Republic* is no rhetorical extravaganza. Each of these topics contributes to the progress of a discussion.

The subject-matter of philosophy, according to Plato, is not a system to be defended; it is a problem to be solved. In method, therefore, it is a discussion and not a debate. The unity of a discussion is to be found not in the topics discussed but in the theme of the discussion. And so in the development of a theme one should follow "whithersoever the argument leads." When progress in a discussion requires the introduction of material from religion, the sciences or art, then Plato uses that kind of material, although it may be both important and necessary to correct it first. Plato is not primarily a metaphysician, but when intellectual advance requires the distinctions of metaphysics, he becomes metaphysical. Art for art's sake, knowledge for knowledge's sake, no more than wealth for wealth's sake, is a just evaluation of values.

It is the purpose of this essay to present a thesis regarding the main problem of Plato's *Republic*. Interpretation

of so familiar a treatise as the *Republic* would be gratuitous were there not current the general belief that the *Republic* is lacking in unity and coherence. For convenience I shall first state the thesis and then present what seems to me to be the evidence in support of it.

I. Statement of the Thesis

The *Republic* of Plato has for its main theme the problem of the relation of virtue and happiness. Platonism is fundamentally a faith. In metaphysics it is the faith that the real is not only the rational, but is also the perfect. In ethics it is the faith that happiness is the natural reward of a good life. It is the purpose of the *Republic* to show that when good men govern virtue and happiness will go together. The construction of a state is undertaken not in order to exhibit justice nor even to define it; it is undertaken to show that when the institutions of society are modeled in accordance with nature, the good life will also be the happy life. Virtue and happiness ought to go together; if they do not, then there is something wrong and unnatural about the forms of social and political organization. If society as at present organized admits the triumph of injustice and makes it possible for the wicked to prosper, the fault is to be traced to our system of education and to our political institutions. If good men are unhappy it is not because nature sanctions it but because society permits it. Unhappiness is not inwrought into the structural framework of nature so as to be, like the poor, with us always. The evils of life are not naturally necessary, they spring from faulty forms of social living. Plato trusts institutions. He believed that poverty and sin and all the ills that human beings suffer from could be avoided if we could devise the proper system of education and the correct political constitution.

In the development of this thesis the *Republic* falls into the following divisions:

I. Formulation of the Problem: Bk. I — Middle of Bk. II.

II. Solution of the Problem: Middle of Bk. II — Bk. X.
Part One: The first demonstration
1. Analysis of pure justice: Middle of Bk. II — Bk. VII.
2. Analysis of pure injustice: Bk. VIII — Middle of Bk. IX.
Part Two: The second demonstration: Middle of Bk. IX —Bk. X.

II. The Formulation of the Problem

Book One and the first half of Book Two are devoted to the development of the chief problem of the *Republic*. Through a series of speeches the one question that becomes more prominent and more serious is: Does it pay to be moral?

1. The speech of Cephalus. The portraiture of Cephalus is not Plato's idealization of old age. It is an old man's discussion of the pleasures of life. Among the first words to be spoken by Cephalus are these: "I assure you that I find the decay of the mere bodily pleasures accompanied by a proportionate growth in my appetite for philosophical conversations and in the pleasures I derive from it"[1] (p. 3). Speaking of his old age, Socrates then asks: "Is life painful at that age, or what report do you make of it" (p. 3)? Cephalus replies: "I will certainly tell you, Socrates, what my own experience of it is" (p. 3). Then follows a discussion the chief problem of which concerns the estimation of the relation of happiness to external things. Is happiness dependent on riches and the possession of property? Or does it consist in an inner disposition of mind and character? Or both? The conclusion is: "A good man can not be altogether cheerful under old age and poverty combined, so on the other hand, no wealth can

[1] All quotations and page references are from the translation by Davies and Vaughan, The Home Library Edition.

make a bad man at peace with himself'' (p. 3). A man can not be happy without riches, not because riches are of any value in themselves, but because they are the means of living a just life.

It had never occurred to Cephalus to doubt that a good man should be happy. His views express the faith of common sense, a faith not based on any serious or reflective analysis. He represents an altogether pre-philosophical stage of thought. It was entirely fitting that he should not remain for the prolonged discussion that followed. He might have been bored; he would certainly have been shocked.

2. The speech of Polemarchus. Philosophy is first dogmatic, then skeptical, and finally critical. Polemarchus typifies the stage of dogmatism. His appeal is to authority and to tradition, and from thence he draws rules for the regulation of life. He expresses popular faith in moral maxims before those maxims have received any reflective analysis. ''To restore each man his due, is just'' is a definition of justice accepted on the authority of Simonides.

The point of Socrates' reply is that such vague and general statements, when subjected to analysis or when made concrete, are both contradictory and inadequate. We might have said, as Hegel said later, ''only the uneducated think abstractly.'' The incidents which Socrates cites in his examination of the quotation from Simonides bring out the fact that justice can not be considered apart from the *consequences* to which the act refers. The real meaning of Simonides is this: Justice consists in rendering to a man that which is appropriate to him. But what is appropriate is a matter which requires a good deal of thought.

3. The speech of Thrasymachus. Thrasymachus, Glaucon and Adeimantus represent with increasing seriousness the stage of skepticism. Moral skepticism may be less the

sin of immaturity than the result of misguided instruction. Plato is a firm believer in the power of education. What men think depends on their intellectual environment. Young men lose their faith when old men lose their reason. The sophists were the teachers of Greece, and what they taught made men doubt that a good man could be happy, or that it was profitable to be moral. The skepticism of Thrasymachus is bold and complacent, that of Glaucon and Adeimantus more serious and reserved.

The views expressed by Thrasymachus represent sophistical teachings. "Justice is simply the interest of the stronger" (p. 18). Or as restated so as to be more intelligible to Socrates: "The interest of the established government is just" (p. 18). On this basis Thrasymachus praises the practice of injustice. The sophist was a specialist in the art of keeping up appearances. Justice, being the specious convention which gives men scruples, is in reality the instrument by means of which the strong exploit the weak. He who thinks it is possible to get forward in a worldly way by a too strict conformity to the rules of virtue is " a simple amusing creature" and certainly could have had but little experience. Innocence realizes its own insipidity and for youth at least virtue is at best but dull and torpid!

Now Plato would never have devoted so much time and energy to a refutation of the sophists if he had not considered them worthy of refutation. It is misapplied half-truth that is dangerous. In the examination of the doctrine put forward by Thrasymachus, Socrates says: "We both admit that justice is in harmony with interest; but you lengthen this into the assertion that justice is in the interest of the stronger: to which I demur" (p. 19). We have in this statement the guiding principle to the interpretation of the *Republic.* The principle is that justice

is in harmony with individual interest. This proposition is never once denied by Plato. To that extent he is in agreement with the sophists and with the more general utilitarian position. Individual interest is the guiding principle of life and a universal rule of action. Justice will certainly have to be defined in terms of interest though it is not the interest of the stronger, there being no reason why any one class should be preëminent in justice.

That justice is not in the interest of any one class is shown by a comparison of virtues with the arts. Both Plato and Aristotle were fond of considering the virtues after the analogy of the mechanical arts. Now all the mechanical arts are concerned with the production of ends which subserve purposes outside themselves. No art is for its own sake, but each is in the interest of ends beyond itself, and that is the *ars artium* which utilizes the productions of all the other arts for an end which no one of the lesser arts can define. Bridles are not for bridle makers but for riders. The physician works in harmony with interest, but not in the interest of himself but of the sick. Therefore, if justice be an art, the class which practices it must do so in the interest of an end more ulterior than the perfection of its own activity.

4. The speech of Glaucon. A complacent answer is sufficient for a complacent skeptic. But a serious and reserved skepticism requires greater sympathy and kindness. Glaucon, feeling the insufficiency of Socrates' reply to Thrasymachus, seeks further light on the subject of the relation of happiness and virtue. He asks: "Socrates, do you wish really to convince us that it is on every account better to be just than unjust, or only to seem to have convinced us" (p. 43)? He does not ask Socrates to say what justice really is but to explain why it is more *profitable* to be just than unjust. In formulating his difficulty,

Glaucon refers to three types of desirable things, those which are intrinsically pleasant but which are of no instrumental value; those which are intrinsically pleasant and at the same time useful; and finally those which are intrinsically unpleasant but valuable for their use. Into which of these classes of desirable things do you put justice? If current analysis is correct, then justice, Glaucon thinks, certainly seems to belong to that class of things which are intrinsically disagreeable but instrumentally useful. And in that event we must conclude that it is better to be expedient than happy. Expediency makes justice instrumentally valuable. But that is not the real difficulty. What Glaucon wants to know is whether justice is intrinsically as well as instrumentally valuable. Let us, he says, dismiss the question of external rewards and consequences and consider justice when taken in itself. Leaving out of consideration the question of expediency, can it be shown that virtue is its own reward?

The problem is stated in terms of the current sophistical distinction between nature and convention. Now there are three propositions which the sophists taught concerning man in a state of nature. (1) To commit injustice with impunity is by nature best; that is, to commit injustice is naturally and intrinsically pleasant. (2) To suffer injustice without power of retaliation is by nature worst; that is, to suffer injustice is naturally and intrinsically painful. (3) The painful consequences following proposition two quite overbalance the pleasant consequences following proposition one. Based on these three propositions the sophists put forward a theory of the origin of justice. Justice is not found in nature; only injustice has a natural basis. As a result of proposition three, men formed a compact on the basis of social expediency. Hence arose legislation, contracts, conventions, and institutions. And so it

is the "custom" to call what the state does just. Thrasymachus was, therefore, quite right in saying that justice is the interest of the established government. Justice, to be sure, is a social necessity, valuable as a means of escaping the evils of injustice, but its value so far as happiness is concerned is purely negative.

Now, continues Glaucon, if this view of the origin and nature of justice is correct, there is only one conclusion to draw, and that is that men practice justice unwillingly. That is to say, virtue and happiness have no basis of identity in nature. And what is more, in the light of what has been said, for men to practice justice unwillingly is quite the reasonable thing to do. In order to show this let us exhibit justice and injustice in their pure form. Or what is the same thing, generalize the law that each individual seeks his own interest. Give to each individual the fullest liberty of action and equip him with all the means necessary to follow out successfully all his natural inclinations, and see what happens. Will such a man, when seeking the satisfaction of his desires, act in accordance with the restraints of convention or in accordance with the impulses of his nature? The conclusion seems to be that natural satisfaction is not best attained through the irksome byways of law and government. Justice as conformity to the established government may be expedient but it is certainly not pleasant. Happiness is best attained by the more direct appeal to natural impulse. "And therefore they affirm, Socrates, that a better provision is made both by gods and men for the life of the unjust, than for the life of the just" (p. 50).

5. The speech of Adeimantus. There is another group of facts which has a special bearing on the discussion, namely the considerations of religion. It is said that the values of virtue are instrumental and among these the

rewards of a future existence are important. Now suppose there is no future life, suppose there are no gods, or that they are entirely indifferent to the actions of men, could it still be said that justice is better than injustice? Add to this the consolations of religious indulgences and forgiveness such as are taught in the mysteries, then what shall we say "respecting the character which a man must possess, and the path in which he must walk, in order to live the best possible life" (p. 53). If happiness be our goal (p. 54) then justice is the poorest way possible of attaining it. "What consideration, therefore, remains which should induce us to prefer justice to the greatest injustice" (p. 55)?

According to Adeimantus the source of the difficulty regarding the relation between virtue and happiness is to be found in the fact that Socrates and all others who have praised justice have without exception done so on the ground of external and instrumental rewards. If justice is to be preferred because its results bring more natural happiness than injustice, then the facts of experience seem contradictory. It is the unjust who are reaping the benefits of life while the just are having a miserable time of it. Now, Socrates, continues Adeimantus, if you had not tried to define justice in terms of its consequences, but had done what Glaucon first asked you to do, namely, to dismiss the question of instrumental values and discuss intrinsic values, that is, to tell us what justice is in itself apart from its external rewards and results, then this difficulty would have been solved. "Therefore, do not content yourself with proving to us that justice is better than injustice; but shew us what is that influence exerted by each on its possessor, for which, whether gods and men see it or not, the one is in itself a blessing, and the other a bane" (p. 59).

By way of summary we may restate the problem. The

sophists were the teachers of young men. What they had been teaching about the origin and nature of justice involved the following conflict:

Nature — Injustice — Happiness — Intrinsic
Convention — Justice — Expediency — Instrumental

The general feeling is that a man can not be just and at the same time seek his own interest. He must choose between a virtuous life and a happy life. Here are serious young men who are mystified by current teaching. They think the best possible life ought to be both honorable and happy. But current teaching involves a conflict between expediency and happiness, between the conventions of organized society and the laws of nature.

In resolving the difficulty Socrates does not attempt to prove that the sophists were entirely wrong. He accepts their basal principles as correct. Individual interest is the guiding principle of life. If this principle is consistently carried out and consistently applied, then justice will join both happiness and expediencey and its values will be both intrinsic and instrumental. Justice is not an escape from the evils of individual interest, it is the means of better securing those interests. Only when society is organized in accordance with this universal law of nature will justice be of service in attaining the best possible life. The only reason that justice seemed less gainful than injustice was that in the organization of society this rule of action had not been strictly adhered to. What Plato says is that if the conventions of society are adjusted to the fundamental needs and interests of human nature there will be no conflict between the satisfactions of natural impulse and the restraints of organized law and government. Society does not exist to curb nature, it exists to provide the conditions necessary for the perfection of natural happiness. The

kind of justice that is irksome is the kind that accompanies institutions that are burdensome. To escape conformity to a certain kind of institution may be and often is more profitable than to comply when compliance means the stifling of impulse. Plato does not say that self interest is unjust. What he says is that if one seeks his interests intelligently and in strict conformity with the natural character of those interests he will be acting both justly and happily.

In order to establish the correctness of this interpretation let us now turn to Plato's solution of the problem.

III. The Solution of the Problem

The constructive part of the *Republic* falls into two main divisions which Plato calls "the first demonstration" and the "second demonstration." The first demonstration, or proof of the thesis that virtue and happiness go together, is sub-divided into two parts. The first part includes an analysis of pure justice and extends from the middle of Book Two through Book Seven. The second part includes an analysis of pure injustice and includes Book Eight and one-half of Book Nine. This division is made in accordance with the request of Glaucon; namely, to generalize the law of individual interest involving the exhibition of justice and injustice in their abstract forms in order, by observing what each one is in itself, to determine the natural results of each in respect to happiness and unhappiness.

A. Part One: The Analysis of Pure Justice.

Glaucon had taken as his point of departure the commonly received doctrine of the origin and nature of justice based upon the current sophistical theory of the origin of the state. It was in terms of this analysis that the problem received its most impressive statement. So in order

to begin at the beginning Socrates gives the correct account of the origin of the state. He too begins with the character of human nature in its original form. There are three basal facts. (1) Individual interest is the law of nature. (2) One individual differs from another in natural endowment. (3) No one is individually independent. Co-operative effort is the result of these basal facts and becomes the means of seeking individual interest. Society is not an artificial contract undertaken in order to ward off the evils of natural injustice. It is a means of better securing the satisfaction of our needs. If physical nature were entirely humane she would have supplied man with the economic necessities of life, but since this is not so the industrial and mechanical arts arise in response to practical necessity.

1. The origin of justice. The bees and the ants exhibit co-operative effort and in some sense live a social life. But they have no state and their actions are neither just nor unjust. Where, then, is the origin of justice? According to Plato, justice arises at that point where education is necessary. "But in what way shall we rear and educate them (i.e., the guardians)? And will the investigation of this point help us on towards discovering that which is the object of all our speculations; namely, the manner in which justice and injustice grow up in a state" (p. 70). This seems a strange passage; what it means, I think, is this. Nature takes care of herself up to a certain point. Up to that point the primitive needs of life find their satisfaction without involving any conflicts. The basal instincts operate without interfering with each other. If instincts in seeking their individual satisfactions never failed to gain their ends and if in gaining them they never came into conflict with one another, then there would be no need for reason nor justice nor a state. But in the na-

tural course of things conflicts arise. The basal needs go astray. It is then that nature can no longer be left to instinctive gravitation. It becomes necessary to educate one, that is, to teach him how to assist nature in providing the means of satisfying human interests. Justice arises at that point where it becomes necessary to harmonize natural interests. So long as interests are gained without conflict there is no need for justice. Justice is an ad-just-ment.

The mechanical and industrial arts arise as means of attaining the satisfaction of our interests. But one wants more than the bare necessities of life. Hence arise the fine arts. The origin of the fine arts is also the opportunity for injustice. It should not be a matter of great surprise that Plato connects the origin of the possibility of injustice with what makes it possible for one to write poetry! Art and morals, therefore, have a similar origin. Art presupposes the possibility of re-adjustment. The need for art is found in the fact that nature left to herself does not adequately and harmoniously supply all our needs. As Goethe has remarked, nature works with a trembling hand. Now if pleasure is to preponderate over pain, interests must be adjusted. To educate one is to teach him how to discover his natural capacity and how to bring it to its highest development, or what is the same thing, it is to teach him how to seek his interests most intelligently. Each must seek his interest; but interests as well as those who seek them differ. The intelligent harmonization of conflicting and chaotic interests makes a moral order. One may be taught to escape the conflicts of natural impulse. Creative intelligence supersedes *laissez-faire* and justice becomes a kind of education.

2. The question of happiness. The strict discipline required in the type of education prescribed for the guardians set forth in Book Three calls forth the following ques-

tion from Adeimantus: "Then what defense will you make, Socrates, if any one protests that you are not making the men of this class particularly happy" (p. 128)? They derive no advantage from their position and lack "everything that is usually considered necessary to happiness" (p. 128). Socrates replies: "By travelling the same road as before, we shall find, I think, what to say. We shall reply that, though it would not surprise us, if even this class in the given circumstances were very happy, yet that our object in the construction of our state is not to make any one class preëminently happy, but to make the whole state as happy as it can be made" (p. 128). The purpose in the organization of the state was not primarily to discover justice and injustice, but it was in order that "after having observed them we might decide the question we have been so long investigating" (p. 129), namely, whether justice in itself is a blessing or a bane.

Socrates answers the inquiry concerning happiness as follows: "Do not compel us to attach to our guardians such a species of happiness as shall make them anything but guardians. . . . We should examine then whether our object in constituting our guardians should be to secure to them the greatest possible amount of happiness, or whether our duty, as regards happiness, is to see if our state as a whole enjoys it. . . ." (pp. 129-130). And so each class must perfect itself and be permitted "to partake of as much happiness as the nature of the case allows it." In the solution of this problem the law of individual interest is restated in the form of a universal rule of action. "Every individual ought to have some one occupation in the state, which should be that to which his natural capacity was best adapted" (p. 147). This principle as restated implies that interest and capacity, taste and talent go together. It is in accordance with this universal rule of

action that Plato discusses such topics as the relation of wealth and poverty to happiness and the size of a state. Each artisan, for example, is to have as much wealth as is necessary for the perfection of his art. A good ruler, if he is interested in ruling, does not want to make a vulgar display of riches. If permanent and lasting happiness is only to be found in the perfection of function, then excess of riches becomes a handicap. In Plato's time, in the absence of any great commercial and industrial life, there was little that one could do with money, except perhaps to spend it on art, and Plato didn't think much of art. Riches as the means of creating the leisure necessary for writing poetry were no avenue to happiness.

The law of individual interest determines the size of a state. The state must not be too large for individual inspection. The guardians were to be overseers, and Plato was not willing to let things drift from under individual supervision. He recognized no principles of social adjustment save intelligence. A state was not to be too big for the administrative watchfulness of a single individual. This is in marked contrast to the political implications of Roman stoicism. No Roman emperor could over-see an empire, and so must trust to forces beyond individual control.

5. Justice and Happiness. The construction of a state was undertaken, we have maintained, not in order to define justice, but in order to discover whether the just man is happy. "Then the organization of our state is now complete, son of Ariston: and the next thing for you to do is to examine it . . . in order to try if we can see where justice may be found in it and where injustice, and wherein they differ the one from the other, and which of the two the man who desires to be happy ought to possess, whether all gods and men know it or not" (p. 139). It makes no

difference whether such a state as Plato constructed existed. What Glaucon asked Socrates to do was to consider pure justice in order to determine its relation to happiness. The construction of a state was entirely subordinate to this. "Then the design of our investigation into the nature of justice in itself, and the character of the perfectly just man, as well as the possibility of his existence, and likewise into the nature of injustice, and the character of the perfectly unjust man, was to use them as patterns, but it was not our intention to demonstrate the possibility of these things in practice" (p. 202). The inquiry was entirely theoretical and was undertaken to show that if men *were* properly educated and if society *were* properly organized in accordance with the basal facts of human nature, then virtue and happiness *would* go together. This method was employed at the specific request of Glaucon.

At the close of the analysis of justice, an analysis too familiar to need exposition, Socrates says: "What now remains for us, apparently, is to inquire whether it is also *profitable* to act justly, and to pursue honourable aims, and to be just, whether a man be known to be such or not, — or to act unjustly and to be unjust, if one suffer no punishment, and be not made a better man by chastisement" (p. 165). The answer comes automatically. Justice is intrinsically as well as instrumentally valuable. When a state is organized according to the universal rule of action which is also a law of nature, then happiness and expediency are joined.

3. The One Great Point. How then are justice and happiness to be attained? They are to be attained, Plato thinks, "if the guardians diligently observe the one great point, as the saying is, though it should rather be called sufficient than great" (p. 133). And what is that point? "Education, I said, and rearing" (p. 133). You can not

legislate men into happiness, you can only educate them for it. The way to perfection is not through legal enactment but through a system of education. Plato did not think any more of lawyers than he did of poets. His guardians are educators, not legislators. The state is a social and not a political institution and must be educationally and not legally conceived. Plato knew the impotence of prohibitory law. "For indeed these are the most amusing people in the world, who imagine that with their everlasting enactments and amendments concerning the matters we lately described, they will find some way of putting down the knaveries that are practiced in contracts . . . ." (p. 138). Passing laws will not make men good. Plato's *Republic* is more a system of education than it is a political constitution. When it is said that Plato trusts institutions, it is educational and not political institutions which he trusts. The primary task of the statesman is to educate the citizens.

Politics is subordinated to education. "For whether the supreme power be in the hands of one or many, the important laws of the state will not be disturbed, if their training and education be such as we have described" (p. 166). It is the problem of the educator to adjust the conventions of society to the basal facts of human nature. The sophists had contrasted nature and convention and had represented them as in conflict. It was for this reason that virtue and happiness were incompatible. Plato wishes to adjust nature and convention and thereby to show that virtue and happiness go together. "Then our intended legislation was not impracticable, or visionary, since the proposed law was in accordance with nature; rather it is the existing usage, contravening this of ours, that to all appearance contravenes nature" (p. 177).

Plato is age-abiding in his statement of problems. He is

Greek in his solution of them. We are not here concerned with Plato's three "waves" of reform. We are only concerned in pointing out that they are worked out in conformity with the basal principles of human nature and that until kings are philosophers "it is difficult to see that there is no other way by which happiness can be attained, by the state or by the individual" (p. 204). The educator-statesman by virtue of his knowledge knows what happiness is and by virtue of his kingly power is able to produce it in others. Philosophy, therefore, is the guide to happiness.

B. Part Two: Pure Injustice.

The division of the "first demonstration" into two main parts was made in response to the request of Glaucon. He had asked Socrates to adopt the method of generalization and to exhibit pure justice and pure injustice. The chief purpose of the inquiry was "in order that, after viewing them all and agreeing as to the best and the worst man, we might examine whether, or not, the best is happiest, and the worst most wretched" (p. 297).

To exhibit pure justice it was necessary to create an ideal state. But material for the exhibition of pure injustice lies ready at hand. Injustice quite as much as justice is a social thing and can only be understood when socially displayed. Institutions spring from the moral dispositions of individuals and their variety is equal in number to the types of human character. Therefore an examination of the types of constitutions will be an indirect way of discovering the character of injustice. There are four forms of constitutions, that of Crete and Sparta, oligarchy, democracy, and despotism; and the worst of these is despotism. The character of the despotic man is depicted in order to see "whether his manner of living is happy, or the reverse" (p. 335).

"Hence, as city is to city in point of virtue and happiness, so also is man to man: is it not so?

"Undoubtedly it is.

"Then, in point of virtue, how does a city under a tyrant stand as compared with a city under such a kingly government, as we at first described?

"They are the very opposite of one another, he replied: one is supremely virtuous, and the other supremely wicked.

"I shall not ask you which is which, because that is obvious. But do you decide the question of happiness and misery in the same way, or not"? (p. 343)

The conclusion is stated as follows:

Well, he said, the decision is an easy one. I arrange them, like choruses, in order of their entrance, in point of virtue and vice, happiness and misery.

Shall we, then, hire a herald, or shall I make proclamation in person, — that the son of Ariston has given his sentence to the effect that he is the happiest man who is best and justest, that is, who is most kindly, and who rules over himself royally; whereas he is the most wretched man who is worst and most unjust, that is, who is most tyrannical, and who plays the tyrant to the greatest perfection over himself and over a city?

Let such be your proclamation, he replied.

And am I to add my proclamation, that it makes no difference whether all men and gods find out their character, or not?

Do so. (p. 348)

C. The Second Demonstration.

"Very well, I proceeded; this will make one demonstration for us. The following must make a second, if it shall be approved.

"What is it?

"Since the soul of each individual has been divided into three parts corresponding to the three classes in the state, our position will admit, I think, of a second demonstration" (p. 349).

In what has gone before Plato has, in strict accordance

with the request of Glaucon, presented pure justice and pure injustice and has on the basis of the presentation compared them with respect to happiness and unhappiness. However, the thesis that virtue and happiness have a natural identity admits of a second proof. This is done in the second half of Book Nine and Book Ten. These closing portions of the *Republic* do not constitute a digression; they are logically connected with the main thesis developed throughout the entire book, and constitute a second type of evidence in support of the thesis.

It has already been shown that the soul is divided into three parts, a rational part, a spirited part, and an appetitive part. There are also three types of pleasure corresponding to the three parts of the soul, and accordingly three classes of men, lovers of wisdom, lovers of strife, and lovers of gain. There is a qualitative distinction among pleasures. The pleasures appropriate to the rational part of the soul are qualitatively superior to the pleasures of strife and gain. The basis of their natural excellence is found in experience. Only he who has experienced the three types of pleasure can be a competent judge of their relative excellence. Not all pleasures are equally pleasant. As in the first demonstration, the occupations of men were determined by their natural capacities, the choice resulting in an aristocracy; so in the second demonstration the types of pleasure are determined in terms of a scale of natural excellence. The conclusion is that the pleasures that are appropriate to the rational part of the soul are qualitatively superior to those of the spirited or appetitive parts and therefore constitute the basis of a more enduring happiness.

Now virtue is a rational achievement. We have seen that justice arises at that point where it is necessary for intelligence to adjust the conflicts of nature. Each man seeks his interest, but interests differ. Each man does that

which by nature he was best fitted to do, but natural abilities differ. It therefore required rational instruction to teach men how to be just.

Justice springs from reason. But highest pleasure also springs from reason. "Hence, so long as the whole soul follows the guidance of the wisdom-loving element without any dissension, each part can not only do its own proper work in all respects, or in other words, be just; but, moreover, it can enjoy its own proper pleasures, in the best and truest shape possible" (p. 359).

In the first demonstration, the one great point was education. The best possible life is the aim of all human endeavor. This aim can be attained only when life is rationally guided. Likewise in the second demonstration the means of attaining the highest happiness lie in education. One must *plan* his life in order to develop that part of the soul that supports the qualitatively superior type of pleasure. "Hence, I conclude, the man of understanding will direct all his energies through life to this one object; his plan being, in the first place, to honour those studies which will impress this high character upon his soul, while at the same time he slights all others" (p. 366). Now the system of education in the first demonstration required drastic political and social reform. It will also be necessary in the second demonstration to introduce reform.

Plato's criticism of poetry in Book Ten and in general his philosophy of art has a very intimate and logical connection with the plot of the *Republic*. It is only when Book Ten is taken out of connection with the last half of Book Nine that its logical isolation becomes a problem. Just as the commercial and vocational life springs from the appetitive part of the soul and is, therefore, qualitatively inferior to a life of speculation, so the realm of the

fine arts in so far as they spring from that part of the soul concerned with the emotions is superior to commerce and industry but inferior to the speculative life. It is the teaching of Plato that art must be subordinated to ethics. That is to say the value of art consists in the contribution it makes to the production of character. "Are not the excellence, beauty, and correctness of every manufactured article or living creature, or action, to be tried only by a reference to the purposes intended in their constuction, or in their natural constitution"? (p. 378) We have, therefore, only to ask what purpose poetry subserves in the development of character to estimate its place in a system of education. And inasmuch as poetry deals with those emotions that arise in connection with the spirited and appetitive part of our nature, it cannot be a means to the development of the highest form of pleasure, namely, appropriate to the rational part of the soul. The educational reforms of the first demonstration follow from the analysis of pure justice. The educational reforms pertaining to art in the second demonstration follow from the analysis of pure pleasure. And the system of education described in the *Republic* is that which is necessary for the union of perfect justice with pure pleasure.

THE LOGIC OF MYSTICISM IN PLOTINUS

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The mystic has always been at a curious disadvantage in the history of thought. There has been too much looseness in his rapture, too much cloud in his vision to make him congenial to the temper and technique of the philosopher. The search for truth, the philosopher argues, has to be conducted without unction or tears. What can never be uttered, what is entirely unutterable, is probably not a truth too great to be spoken, but a confusion too complete to be endured. The mystic has been classed with rhapsodists and muscians and admitted at most occasionally as a tinkling interlude into the sober conversation of philosophers.

The prejudice against the tears and melodrama of mystics should not cloud the historian to the merits of mysticism as a method in philosophy or as an ultimate point of view from which to regard the world. Not all mystics are sentimentalists, and the distrust of cosmic unction should not include those great mystics, (including Plato and Spinoza) whose mysticism is not an excursion into *Schwaermerei,* but the last inevitable step in a logic that has been carried as far as logic will go. In the mysticism of a thinker like Plotinus, reason is carried strenuously and precisely to the very heart and substance of Being. If there it finds its own terminus, it must be noted that that terminus has been found by reason itself. For Plotinus mysticism is not the evasion but the climax of thought. His whole metaphysics drives one inevitably toward the ultimate ecstacy. It is only in the light of his carefully considered analysis

that the final rapture has a status, and it is only in the intellectual understanding of that metaphysics that it has a meaning.

The general intellectualistic prejudice against mysticism has operated against a decent attention to the cogency, clarity and persuasiveness of Plotinus' system. A thinker more completely consistent, granting him his premises, or more fundamentally perspicuous is hardly to be found in the history of philosophy. This essential lucidity of his system has for many reasons been obscured. His writings, in the first place, consist of chapters, it would be more accurate to say separate essays, in the pivotal aspects of his system. The anatomy of the whole structure can hardly be perceptible to the casual reader. But each separate Ennead is a variation upon a constant and constantly maintained theme; each apparently independent treatment is envisaged clearly in the total context. Plotinus, save in very rare instances, never discusses anything, the soul or happiness, virtue or magic, God or matter, without unmistakable reference to the totality of his universe. Each separate inquiry is a function of the whole analysis, as each separate life and thought and existence are incidental expressions of that pervasive Unity about which alone it may be said that It is.

A second cardinal difficulty in the understanding of Plotinus is the inadaptability of language to the expression of the kind of reality which, for Plotinus, alone is real. The fact that terms are logical in their status and import does not for the modern student of philosophy carry with it a warrant of their ontological ultimacy. We have become so accustomed to regarding words as symbols, as the stable counters for unstable things that it is difficult for us to realize that it is precisely the ontological reality of essences that arrests Plotinus' interest and controls his

imagination. A term is, for Plotinus, not a matter of psychological convenience, or of merely logical intention. Terms, essences, ideas are the constituents of being; an analysis of logic is an analysis of reality. Finally, but only finally, logic itself is shown to be a derivative and expression of a reality that transcends logic and analysis altogether.

The difficulties in understanding this position are due not simply to the trouble the modern student has in taking Plotinus' terms with metaphysical rather than merely verbal or logical seriousness. Despite the sophistication that a modern reader of philosophy gets from current idealisms, it is difficult to overcome the prepossessions of our quotidien intellectual habits. Again and again Plotinus has to urge the reader to come at his world unconfused by the routine he must have developed concerning time, space and the tangible world. He demands what is very rare even among philosophers — a suspension of disbelief in the reality of ideal terms. This involves what is for unregenerate common sense even more difficult, a suspension of belief in the world of mundane, temporal and spatial experience. It demands an abandonment of our most inveterate categories in routine experience, quantity, spatial distinctions, temporal limits. It demands that we give up a metaphysical faith in everything save the inexpungable and invariable being of essences and ideas. One may go so far as to say that, with the possible exception of Hegel, no one has ever more thoroughly hypostatized thought and thinking than Plotinus does in his analysis of reality. His difference from Hegel, and it is profound, is that this hypostasis is itself ultimately seen to be merely a matter of analysis. The reality of essence is a distinction made within, or an expression of a reality in which logic and distinctions are meaningless and impossible.

It is precisely this necessity for abandoning the familiar round of psychological assumptions and logical *clichés* suited to the study of the moderns that makes Plotinus as educative as he is a difficult metaphysician. Unless one shakes the dust of the conventionally categorized world from one's feet, one cannot go with him at all. One must freely enter into his realm where logical terms are cardinal and ultimate entities. Enter with him into that realm, and his exposition becomes singularly simple and conclusive. Within it find their clear and irrevocable niche all the variety of human experience, all the furniture of Heaven and Earth. One is led through the close web of dialectic as by an inescapeable avenue to an unavoidable goal, a final and rapturous union in which dialectic loses itself as it realizes itself in the Unity that is all there is.

It must finally, in preface, be noted that what interest in Plotinus there has been has seldom been that of understanding his system of intellectual mysticism in its own terms. The interest has been ulterior and, as I cannot help feeling even in Dean Inge's recent and spirited detailed analysis, marked special pleading. Plotinus has long and more especially recently interested Christian philosophers and apologists because of his profound influence on Christian thought, notably on Augustine. Plotinus has likewise interested Platonists who sought a Platonism more literal than the metaphors of Plato; this has been provided by the literal and relatively forthright metaphysics of Plotinus. The cosmology that emerges from the Enneads, the ontology implicit in them, is more tight, fixed and syllogistic than any that can be derived by main force from the fluid poetry of Plato's myths. Plotinus has rarely been treated for what he is, a unique fusion in Western thought of passionate mysticism with the consecutiveness and precision of the rationalistic metaphysician. It is a singular intellect-

ual monument, the stringency of a highly logistic metaphysic employed as a justification of and a technique toward rapture, an ecstacy which that very metaphysics has as its inescapeable last term.

Perhaps the most convenient way to expound this metaphysic of rapture is to begin with a fact as common and substantial as that noted by any empiricist. There is no good reason why the term empiricist should be confined to those who find their data in bits of sensory discriminations or emotional vividness. Plotinus is as immediate, realistic and toughminded as any one in calling attention to the fact of thought. It is only a provincialism of the spirit encased in a body and moving in the practical confines of space and time that makes the fact of thought appear less real than the things touched by the fingers or exciting to the heart. It is this ultimate datum of thought that Plotinus regards as cardinal, and, since the metaphysician like the poet or painter may begin anywhere, it is as cardinal as any other. But the thought that Plotinus refers to is not a neural process, nor a temporal occurrence in a mortal brain or a changing mind. It is thought absolute, thought in its essential character as thought, thought as the sheer dialectic, impeccable structure it is. It is fashionable nowadays to talk about the natural history, the biological conditions or the organic functions of thought. Plotinus is more naive, wholehearted and direct. He is talking of thought in its essence, not its accidents or its incidence. He is trying to analyze the essences with which experience is shot through. These, as he believes and tries to demonstrate, are what alone constitute the reality which experience, the fleeting shadow of being, temporally and pallidly incarnates.

It will be most convenient, perhaps, to use, as MacKenna does in his translation, the words Intelligence and Intelligibles. *Intelligence* is the name for the absolute mind,

logos or Logic, correlative to the Essences, Intelligibles, Ideas, in the intellection of which the Being of Intelligence consists. *Intelligibles* is the name given to those eternal archetypes, essences, ideas, which are beheld, Intellected, contemplated by Intelligence. The being of Intelligence consists in its beholding of Intelligibles, the Being of Intelligibles consists in their being beheld. The Being of thought may be considered from the viewpoint of the absolute thinker, the absolute thoughts or the eternal noetic connection between them. The absolute Intelligence [1] and the eternal intelligibles are identical in the sense of being inseparable correlations or functions of each other. Only Intelligences could think Intelligibles; only Intelligibles could be thought, intellected or beheld. It is hard not to regard thinking as a temporal, psychological and transitive process. But it must be remembered that Plotinus is not describing the process or the function of thought in the human soul or the human animal. He is simply analyzing the implications of Thought, as it were, *an-sich*, of the inevitable logical status and conditions of essences, terms, ideas. To have Being it is not essential that intelligibles be events in somebody's mental experience. But logically considered it is essential that intelligibles be intelligible to some intelligence. The unitary reality is Thought which upon examination turns out to involve Thinker and Thought. Nor must this be remotely taken to mean that Intelligibles are psychological happenings occurring in the history of a temporal though absolute mind. The Being of the Absolute Mind is constituted by the eternal archetypes which are present to it, in the contemplating of which its life consists. And their intelligibility to an Absolute Intelligence is what their Being consists in. Strictly speaking, Intelligence, the pro-

1 Mind, Logos, Intelligence, Intellectual Principle are here used interchangeably, according to which is least awkward in the given context.

cess of intellection and the essences, to use an awkward phrase, intellected, are simply linguistic distinctions within a reality which can best be summarized as Absolute Mind, or the Intellectual Principle or the Logos. In Plotinus' own language:

> The Intellectual Principle is itself the Intelligible; — the object of true knowing and at the same time the Intelligent, True Knower. Real-Being and the Intellectual Principle are identical; for the Divine Mind does not act upon its object as sensations act upon material things which must exist apart from the sensations; the Intellectual principle actually is all the sensations upon which it exercises its Act. (V, 4, 2.)

It has been pointed out that this analysis of the Absolute Logos or Divine Mind is made with reference to the logical implications of essences and their intelligibility. Plotinus is simply defining intelligibility and indicating the dichotomy of a thinker and thought which it involves. But he has a much more far-reaching metaphysical intention. This Divine Mind or Absolute Logos may be conceived of, nay, must be conceived of as an ordered cosmos of reason, as a system, logically connected, aesthetically harmonious, morally symmetrical and ordered, of Ideas. These Ideas are, as has been well suggested, comparable to Dante's circle of angels and blessed spirits gathered in contemplation and service around the throne of God. (Whittaker and Gaird.) This Logos or system or harmony of ideas constitutes the pattern, the eternal and ideal anatomy of reality. "All the phases of existence down even to Matter, the lowest faintest image of real Being are ideally present from eternity in this realm of Divine Thoughts, this Totality of the Supreme Wisdom or 'Mentation'."

The analysis of logic turns out to be the anatomy of Logos, the permanent geography of Being. For all that is, has being in so far as it incorporates, realizes, incarnates this Logos. All particular minds or intelligences are, in

so far as they have attained clarity, penetration and vision, phantasms, representations more or less shadowy and inadequate of this universal Logos.

It must constantly be held in mind that what holds true of absolute or universal logic holds true, anagramatically or microcosmically of the logical processes of the individual soul. What is true of the dichotomy of thinker and thought and their inescapeable noetic connection holds true of that thinking which goes on in the individual human being. The single mind is realizing so far as limitations of individuality and its corruptions by space and time and physical irrelevance make possible, an epitome of the immediate act of perfect vision of the Absolute Mind. All that holds of the Logos holds of the human mind in so far as it is a mind, a clear intellect envisaging unclouded and genuine essences.

An analysis of some of the implications of Absolute Mind will serve to enforce the parallelism between Thought Absolute and the thought of individual minds. Absolute Mind is authentic existence, metaphysical reality, true being. But it is obviously not the ultimate source and wellspring, the transcendence from which all else flows and by virtue of which all else is. This for several reasons: the essence of Being is for Plotinus unity — pure, ultimate and absolute, As well conceive of a house, a ship, an army, which exists simply as a multiplicity of parts, as conceive of a universe or realm of being which has true being apart from unity. "All beings exist by the One; take away their unity, and they lose their Being." (VI, 9, 1.) "An army, a choir, a herd, a house, a ship, planets, animals, a man, a principle of unity makes them what they are, and this principle in them is an image, a distant reflection of the unity that is the all transcending one."

The mere concept of multiplicity implies a unity in

which that multiplicity alone could have a meaning. The Intellectual Principle involves the duality of thinker and thought and is, therefore, multiple; it is, moreover, multiple by virtue of the variety, though ordered, of the thoughts, essences or ideas the contemplation of which constitutes its being: "The Intellectual Principle thus contains the multiple; therefore it is not the first; there must be a principle transcending it. Multiplicity is subsequent to unity, and the Intellectual Principle is Number; the source of this number is the one; Divine Mind as being both the Intellectual Principle and the Intellectual Cosmos is twofold; as long as we have duality we must still go higher until we reach what transcends the Duad." (III, 8, 8.)

Of the One more must be said later, though it is part of Plotinus' doctrine that nothing but negatives can be spoken of the One. For the moment suffice it that the One, Absolute and transcendent even to the Absolute Mind, is logically needed as the Unity in which the duality of thinker and thought is reconciled, the unitary field, so to put it, in which that dichotomy is made. The Logos, considered absolutely rather than in its variety of constitutive ideas, has to have an object. The One is the object of vision attained, the object of thought, the sight of the seeing. Indeed, speaking from the point of view of totally conceived metaphysics, the dichotomizing between thinker and thought that occurs in the realm of thought, the multiplicity of essences which constitute the Logos are simply a provincial distinction of analysis. And the realm of Logos exists at all simply as a gratuitous "overflow or abundance of the One." This transcendent Unity is creative, expressive, generative. The mere being of it generates an eye to see it, a Logos to think it, a vision to behold it. The whole realm of Logos is ultimately simply a vision straining to behold the unity, the beholding

of which is its life. But the beholding is never complete, since where there is division and multiplicity there can never be unity and where there is not unity there cannot be complete identification with the One.

One of the implications of the Logos is thus seen to be the transcending unity which it implies and from which by implication it is seen to be derivative and secondary. But just as the transcending One flows into or generates or calls into being an intellectual vision (whose being and whose activity consist in a beholding of its generator), so the Logos generates an hypostasis, the World-Soul. The World-Soul is a pivotal conception in Plotinus and perhaps particularly demands exposition. It is the vital, or more accurately, the vitalizing principle and cause of reality. Just as the Intellectual Principle derives from and is an expression of the One which it beholds, so the World-Soul is a derivative from and an expression of the Intellectual Principle. The World-Soul is the mediating phase of divinity. Its being as part of the eternal hypostasis of divinity, consists in its upward looking, its grasping, contemplation, beholding of the realm of mind; but besides being itself, it has an ontologically creative function; it is the vital principle, the mediating life through which the patterns of Essence, the eternal anatomy of reason are realized, made to infuse the formless realm, almost literally the non-realm of Non-Being. If one may so put it, the World-Soul is the dynamic aspect of the Logos; it is Thought absolute made operative in experience. It is the changeless immobility of archetypes giving life to, becoming or being the life of all things. It is his distinction of the World-Soul from the Intellectual Principle that gives the connecting link for Plotinus between Time and Eternity, between appearance and reality. The incarnation of the World-Soul in experience gives appearance whatever real-

ity it has. It is through the mediation of the World-Soul that the Word becomes Flesh. It is not so much that the spirit is breathed into things as that things are, in so far as they can be said to be at all, by virtue of what they incarnate of spirit. If there is any single thing that qualifies the rationalistic aspect of the Plotinian universe, it is this third hypostasis of divine reality. For the world soul turns a lifeless and abstract Logos into a living and animating principle. It makes the logic of essences the breath of life. The Soul *is* by virtue of its intellective quality, and all else, in temporal and spatial experience *is*,[2] by virtue of its incarnation of soul.[3]

What was said above of the parallelism of Mind Absolute and mind in the individual may be repeated here with reference to the soul. "The All-Soul, the Universal Life Principle," in Mr. MacKenna's excellent statement, "the All-Soul is in and is all the souls; the human soul, therefore, is the All-Soul; but it is the All-Soul set into touch with the lower; it is the All-Soul particularized for the space, at least, of the life of mortal man." What holds of the All-Soul holds true, therefore, of the individual soul. The character of the one is the character of the other, save in so far as the individual soul is limited by particularity, which involves space and mass and time, and as a complication of these all the sensations and emotions which tend to corrupt the essential nature of soul. That essential nature is intellection; the grasping and vision of intel-

2 It is a pity one cannot say in English that things *be* — it would be helpful to have a term that connoted metaphysical being instead of merely empirical existence.

3 "The soul's substantial existence springs from the Divine Intellect, and its expression in characteristic act is effected by virtue of its vision of this Divine Intellect, for as its vision penetrates into this, it possesses for itself as its very own what it sees no less than what it effects; nothing can be called an Act of the Soul, but what it does after the mode of its intellectual nature, and so, entirely after its own character; all that is lower than such act has another character and is an accidental experience merely." (V, 1, 3.)

ligibles, the intellectual life. In so far as man really *is* or really is alive, he is so by virtue of that steady contemplation of eternal essences. In this timeless operation he is simply realizing as an individual the universal nature of the All-Soul. In so far as man can attain to this uncorrupted activity of soul, the cloudless envisaging of true existence, he is living the life of divinity. But there are accidental reasons, that is accidents of the nature of man as an individual that corrupt the god in him, on some possession of which his being at all depends. Were he completely to lose the vision or possession of these changeless essences, he would not only cease to be a mind; but, ceasing to be a mind, he would cease to be at all. In the conditions of animal and temporal life, men see more or less clearly and have life, therefore, more or less actual and complete.

It will be impossible in this paper to go into detailed explanation as to the reasons why the soul must enter into a body, why it needs to become individuated and materialized, and to live an existence through time and in space. It may be put briefly in the form of a metaphor. Plotinus' realm of reality is an order, as it were, of angelic intelligence. But there remains in his thinking an irreconcileable devil. Like all idealists, Plotinus may insist, as he will, that reality is an order of absolute reason, itself a noetic distinction within a transcending unity and perfection. But the experience of the empirical world of sense needs to be accounted for, and the operation of the empirical man with human problems, temporal conditions and animal emotions. This realm, if what is negative can be called a realm, Plotinus calls Non-Being. It has whatever appearance of reality it manifests by virtue of the reality which it incarnates. The divine radiation of reason serves in some measure to animate this death; to give form to formlessness, life to what is not even being, reason to what so far as it

can be logically conceived at all, is chaos. Matter, non-being is simply the last conceivable extremity of reason.[4]

The soul of man, in essence a pure intellectual essence, is in its operations not pure. It is clogged by mortality, conditioned by temporal circumstance, corroded by this refractory matter to which it gives whatever life that matter may be said to have.

If the individual soul were always and in every instance what it is sometimes in the best or most philosophical of men, it would live and shine its proper activity and exhibit its true being, immediate contemplation of the essences whose contemplation constitutes the Logos of the universe and the divinity in man. But inhabiting a body not completely transfused into reason, and provincialized into space and time, the soul has an inferior faculty and function. This Plotinus describes as discursive reasoning, whose product in Plotinus, as in Plato, is opinion. It is the distinction between practical and speculative reason, between prudence and vision. The kind of thinking that practice engenders is simply instrumental; if there were not privation there would be no seeking of steps toward an end; if there were no doubt there would be no calculation or inquiry; if there were no uncertainty, there would be, in the usual empirical sense, no thinking. The mediation of connecting links, the apparatus of logic, indicates that not only is thinking directed toward the attainment of some un-

4 "Matter is without body; body is of earlier date, less distant from the divine, and merely includes Matter, . . . neither is matter a spirit or a mind, it is not life, it is not a Reason-Form or Idea; it is not a limit; it might be more nearly described as a boundlessness; it is not a power or potentiality, and since it is none of the things of this sphere, it cannot come under the name of an Existent; it is, rather, Non-Being; and it is not even this in the sense in which Motion and Rest may be called Not-Being; it is merely a phantasm or shadow of space; an aspiration toward existence; it is present where no one sees; it ever eludes the eye that searches for it; it is a ghostly thing incapable alike of going or staying; since it has drawn no force from the divine; and, so all its pretense of existence is a lie." (I, 8, 7.)

attained perfection, but that thinking itself is tentative and precarious. One may say that in Plotinus the exigencies of practice make necessary discursive thought and that discursive thought, simply because it is discursive, is not truly thinking. True reasoning is not logically linked discourse moving precariously toward some clarification of a temporal problem by a human animal living in a world of space. Genuine contemplations are immediate intuitions of timeless essences, thinkers facing and possessing their thoughts and constituted by them. It is a sign of declension from divinity to have to move toward a fulfillment, to devise means toward an end. It is not thinking at all in the proper sense, and so, strictly speaking, it is not specifically an activity of the soul, or an index to its essential life. It is rather a symptom of the soul's conditioning and corruption, the poor device of a spirit trapped in matter scheming to maintain its comfort or security in that trap. It is that utilitarian parody of thought practised by the citizen or the statesman absorbed in the vicissitudes of time. It is the soul's twisted appearance and diverted function in experience, not its proper reality or appropriate career.

There is still a third and, using the term broadly, lower phase of the soul, the consequence of the soul's vitalizing of matter into an organism or body. This may be described as the Soul, as a psycho-physical process, as an animate or animal entity. This phase of the soul consists of the vegetative, nutritive and generative faculties. This vegetative soul is in some small degree divinity or it would not be at all. But its divinity is qualified by the recalcitrance of the matter which is at this stage only very tenuously rationalized. Where the modern mechanist would say that each man, however spiritual in his reachings, is a Caliban at bottom, Plotinus says practically the reverse. Even in the Caliban that constitutes each of us basically

there is a faint glimmer of divinity, else even Caliban could not be. These three "souls" distinguished in man are not three separate faculties or hypostases. They might better be described as studies of the soul in three stages of declension, the soul, in its abstract and abstracted intellectuality, the soul as clouded by practice and corrupted by necessity, the soul in its last diminuendo of vegetation, appetite and impulse, in which it is almost seduced into ultimate non-entity.

This is, perhaps as far as it is necessary to go for our purposes in the general metaphysical background of Plotinus. We can here begin to pick up the thread of logic by which he forces the soul into mysticism. There is in each individual a spark of divinity, which spark represents an essence, is an image of the whole of essence, distils all divinity, quintessentializes the Logos. Only in so far as there is this animating spark is there, speaking with metaphysical seriousness, any being in man. But this spark is feeble in the unregenerate man; he is more dead than alive. The absorptions of practical life and the seductions of carnality do not so much divert his attention as they destroy his Being. The whole burden of Plotinus' teaching as a way of life, is the escape from death to life, from non-being to reality. And this escape begins within the soul of man. Plotinus' counsel may indeed be described as a way of recovery rather than one of escape. For if the soul can recover its essential life, retrieve its essence, it will have arrived not only at its own clean heart, but at the heart of all there is. "What," in Plotinus' phrase, "is the path; what is the upward way?"

One that seeks to penetrate the nature of the divine mind must see deeply into the nature of his own soul, into the divinest part of himself. He must first make abstraction of the body, then of the lower soul which built up that body, then of all the faculties, of sense, of all desires and emotions and every such triviality, of all

that leans toward the mortal. What is left after this abstraction is the part which we describe as the image of the divine mind, an emanation preserving some of that divine light. (V, 3, 9.)

The call of Plotinus is thus in a literal sense a call to life and to life eternal. Contemplation is the life of the soul, and the life of the soul is the life of all things. The practice of intellection is in Plotinus not a higher as opposed to a lower career. It is life itself as contrasted with successive corruptive diminutions or degenerations of it. It is not the good as opposed to the bad life; it is the life completely alive as opposed to the death that matter is apart from its incarnation of reason, the nonentity and decay toward nothingness that are synonymous with the senses and the passions. The "Upward Way" is a recall to reality; a recoil from non-being.

Part of this retreat to life is, as we shall see, predominantly intellectual. It is possible only to the dialectician and metaphysician, though it begin in love and end in rapture. But a preparatory purification is necessary. The hand becomes subdued to the colors it works in; the soul becomes acclimated to degeneration; it wallows in non-being. To love and to lead the life of action and the life of passion is to court literally death. It is "the expense of spirit in a waste of shame." The first step toward living in a steady vision of truth is to cleanse the soul of its corruptions, to restore the spirit to its integrity. When the soul, in its proper essence of contemplativeness comes to self-consciousness, it will be a clear mirror of the Logos the beholding of which gives it life. It will be a lucid transcript of what it really is. It will have recovered its own clear being which is the indispensable step to being, and through being to beatitude. "The main need, the cry of man's nature is to become actually as he is potentially divine." The whole of morality for Plotinus consists in a sloughing off of the earthly accidents of man's nature until

his soul vibrates in consonance with the Godhead from which all else derives, the separation of the reasonable or intellectual soul from the body-soul and from the body.[5] Plotinus counsels all the traditional Platonic virtues, courage, temperance, wisdom, and justice. They are virtues in the sense that they realize in some measure the intellectual principle in experience, and, eventually, set that principle utterly free. They give reason to matter, thus raising matter to life. And they free that life eventually from its encumbrance of matter. But the civic virtues are simply preparatory. Their values lie not at all in their instrumentality. They are virtues not because they make a better city or polity, or because they bring, in any mundane sense, good fortune. They are not good because they are the best policy. But anything that makes for the incarnation of reason in the world makes for the realization of life and the rationalizing of the soul (equivalent terms) in the individual. Like the Stoics, Plotinus finds nothing but goodness good, and goodness is, in so far as it is not a flight from evil or corruption, the practice or living of the Good or purity of the Intellectual Principle.[6]

5 "What else is *Sophrosyne*, rightly so-called, but to take no part in the pleasures of the body, to break away from them as unclean and unworthy of the clean? So, too, courage is but being fearless of the death which is but the parting of the soul from the body, an event which no one can dread whose delight is to be his unmingled self. And magnanimity is but disregard for the lure of things here. And Wisdom is but the Act of the Intellectual Principle withdrawn from the lower places and leading the soul to the above.

"The Soul thus cleansed is all Idea and Reason, wholly free of body, intellective, entirely of that divine order from which the well spring of beauty rises and all the race of beauty." (I, 6, 6.)

6 "The Civic Virtues on which we have touched above are a principle of order or beauty in us as long as we remain passing our life here; they ennoble us by setting bound and measure to our desires and to our entire sensibility, and dispelling false judgment, — and this by sheer efficacy of the better, by the very setting of the bounds, by the fact that the measured is lifted out of the unmeasured and lawless."

"And further these Civic Virtues, — measured and ordered themselves, and acting as a principle of measure to the soul which is as matter to their forming — are like to the measure reigning in the over-world, and they carry

To live the life of order, temperance, wisdom, courage on earth and in earthly experience is to live some anagram of divinity, to emulate, at any rate, the pattern of divinity. Friendship is a good because it promotes unanimity and generality, a conspiracy of minds beholding eternal identities. But it is not the ultimate good or the ultimate life. It is the second-best because at most it is but an imperfect imprinting of reason upon a matter that will never bear the impress clearly.

> The Soul is evil by being interfused with the body, and by coming to share the body's states, and to think the body's thoughts, so it would be good, would be possessed of virtue, if it threw off the body's moods and devoted itself to its own act — the state of Intellection and Wisdom, . . . Such a disposition in the Soul, become thus intellective and immune to passion, it would not be wrong to call Likeness to God; for the divine, too, is pure, and the Divine Act is such that likeness to it is Wisdom. (I, 2, 4.)

"But our concern is not merely to be sinless but to be God." It is not enough that the soul hold itself above all passions and affections, to be through the constancy of reason above the fleeting seductions and corruptions of sense, appetite and circumstance. In the soul harmonized and free, what form does virtue take? "It appears as wisdom which consists in the contemplation of all that exists in the intellectual principle and as the immediate presence of the intellectual principle itself."

For the genuinely wise and emancipated soul, Civic Virtues will seem merely a step toward the good. "He (the freed soul) will work for the final disengagement; he will live no longer the human life of the good man, — such as civic virtue commends; but leaving this beneath him, will take up instead another life, that of the gods. For it is

> a trace of that Highest Good in the Supreme; for while utter measurelessness is brute matter, and wholly outside of Likeness (to the Supreme), any participation in ideal form produces some corresponding degree of Likeness to the formless being there." (IXXX, 1, 2, 3.)

to the gods, not to the good that our likeness must look. To model ourselves upon good men, to produce an image of an image, we have to fix our gaze above the image, and attain likeness to the supreme examplar.'' (I, 2, 7.)

From this point on we shall be concerned with what Plotinus calls the Upward Way. Through civic or mundane morality a man may have learned how to bring an imprint of reason into the world of sense, emotion and things. But he must be converted to the world of reality where his soul may more constantly abide.

There are, according to Plotinus, three temperaments or types peculiarly susceptible to divinity, peculiarly candidates for the complete recovery of a complete life. Plotinus, like Plato, saw a singular kinship between love and art and philosophy. The chord that thrills the musician, the comeliness that captures the lover and the consistency that convinces the logician were to his poetic mind three variants of the same eternal thing, the ordered loveliness, the lovely order of Reason. And, among all the thousands of unregenerate men lost in the obliterating purlieus of the world, there were three types of men who saw through the husks of corruption to the kernel of genuine being. Out of the dross of dead souls absorbed in dead things were a few golden spirits dedicated to the gleams of gold evident even in the tarnished vessels of sense. Of these the first is the musician, taking him in the broad sense of one sensitive to the beauties of all those arts presided over by the muses, or in that narrower sense of one susceptible to the magic of sound:

> The musician we may think of as exceedingly quick to beauty, drawn in a very rapture toward it; somewhat slow to stir of his own impulse, he answers at once to the outer stimulus; as the timid are sensitive to noises, so he to tones and to the beauty they convey; all that offends against unison or harmony in melodies or rhythms repels him; he longs for measure and shapely pattern.

This natural tendency must be made the starting point in such a man; he must be drawn by the tone, rhythm and design in things of sense; he must learn to distinguish the material form from the Authentic Existent; which is the source of all these correspondences and of the reasoned scheme of a work of art; he must be led to the beauty that manifests itself through these forms; he must be shown that what ravished him was no other than the Harmony of the Intellectual World; and the Beauty in that sphere; not some one shape of Beauty but the All-Beauty, the Absoute Beauty; and the truths of philosophy must be implanted in him; to lead him to that faith which unknowing he possesses within himself. (I, 3, 1.)

The path of the lover of beauty is one path to realization of divinity, for Beauty, as Plotinus shows in detail in his magnificent Ennead bearing that title, is nothing more nor less than order in an object, or reason made visible to the senses. The lover of beauty is in love not with things but with the harmonies implicit and obvious in them. He is touched by the logic of forms before he is conversant with logic itself; he recognizes the presence and reality of reason before he is face to face with it directly, or can understand it. He is by virtue of an intuitive drawing toward the Logos, in its most seductive earthly embodiment, a fit candidate for the training in dialectic that will enable him to possess and become one with Reason.

So, too, with the born lover, "to whose degree the musician may also attain, and come to a stand or pass beyond." The lover, too, is passionately susceptible to reason, but likely in his passion to be "spell-bound by the visible loveliness," to cling about that instead of advancing or repassing to the ideal beauty of reason which that visible loveliness passionately recalls. He is, in steps somewhat similar to those outlined in the Socratic speech in the Symposium, to go step by step toward a vision of and absorption in the absolute beauty which is the ultimate spring of his passion.

His lesson must be to fall down no longer in bewildered delight before some one embodied beauty of form; he must be led under a

system of mental discipline, to beauty everywhere and made to discern the One Principle underlying all, and elsewhere more truly present. The beauty, for example, in a noble course of life, and in an admirably organized social system may be pointed out to him; a first training this in the loveliness of the immaterial; he must learn to recognize the beauty in the arts, sciences, virtues; . . . from these he is to be led to the intellectual principle, the authentic existent; thence, onward, he treads the upward way. (I, 3, 4.)

The lover and the musician are brought to a pursuit of reason through these moving embodiments in visible shapes or lovable bodies. There is another temperament quick to the persuasion of reason, and needing no such captivations of the senses or the heart. This is that rare thing, a born metaphysician. The musician and the lover, too, must become metaphysicians, or pass through the avenues of dialectic to the palace of reality. There is no other way. But where the musician and the lover are distracted by accidents of earthly embodiments of reason, the metaphysician pierces straight to the essences which they embody. He does not need the tangible shapes of things, the heard harmonies of music or the fleshly incitements of a beloved person to awaken him to the reason which these embody. He needs no intellectual adolescence. He is an adult disciple of the austere good, truth and beauty that is reason. But he like the others needs a way, a discipline, a technique for their clearer envisaging. This path is the path of dialectic.

It is singularly characteristic of Plotinus that the path to rapture should be the path of reason in its most stringent and abstract form. The freedom of ecstacy is possible only through the discipline of thought. In this discipline, there is a close parallel to the education Plato prescribes for the philosopher in the Republic. Mathematics comes first, to "train him to abstract thought and to faith in the unembodied. . . ." After mathematics he must be put

through a course in dialectic and made an adept in that science.

The science of dialectic is, for Plotinus, at once a method of reasoning and a vision of true being; it is a technique of logic and a survey of ontology. It is true knowledge of true being. In a sense it is simply the close technique of categorical distinctions:

> It is the method or discipline that brings with it the power of pronouncing with final truth upon the nature and relation of things, what each is, how it differs from the others, what common quality all have, to what kind each belongs, and in what rank each stands in its kind, and whether its Being is real being and how many beings there are, and how many non-beings to be distinguished from Being. Dialectic treats also of the Good and the Not-Good; of the particulars that fall under each and of what is eternal, and of what is not eternal, and of these it must be understood not seeming knowledge, sense knowledge, but with authentic science. (I, 3, 4.)

But dialectic is more than the art of distinguishing categories; it is rather the final flower of that art, the eternally unified intuitions of eternally unified essences.

> It leaves to another science all that coil of premises and conclusions called the art of reasoning. . . . It is the precious part of philosophy, it does not deal with bare theories and rules; it deals with verities. Existences are, as it were, matter for it; or at least it proceeds methodically toward existences and possesses itself at one step of the notions and the realities. (I, 3, 4.)

Dialectic must, therefore, be conceived as one step, as the technique of logical distinction and the fulfillment of ontological vision. It is that strict discipline of mind by which mind as individual surveys Mind Absolute, and in surveying the latter surveys its own essence and the essence of all things. It is as far as thought can reach: the beholding of thought, thought become completely self-conscious and therefore a clear, comprehending mirror of all being and of all life. Dialectic is the logical correlate of ultimate being; it is the mind beholding its identity with being;

logic discovering itself as the geography of being. The clarification of ultimate categories and cardinal essences which is the business of dialectic, is at once the clear vision and clear living of reality. Of reality, that is, as far as reality can be said to have Being. For Being itself, it must be remembered, is a dialectical distinction, and a derivative from the unity by virtue of which it is. Dialectic may be said to carry the mind into complete co-incidence with the very center of Being. But the center of Being is not the center of the universe. It is rather the eye straining toward the center of the universe and longing to be one with it. But the unity with Unity itself is not susceptible to the technique of dialectic, nor is it for the mind at all. For in that union mind itself is transcended.

This is the irony and paradox of thought. Through thought alone can the soul come to the second order of Divinity, the Logos or Thought Absolute. Thought, though it carry the soul to thought, will carry it no further. The soul will become a clear light seeing light: "The Intellectual Principle sees itself; and this light shining upon the soul enlightens it; that is, makes it a member of the intellective order." (V, 3, 6.) But it will not, it cannot, by the very fact of being thought, carry it to the supreme transcendence.[7]

The soul even when it recovers its purely intellectual character and life, is still engaged in the pursuit of and seduction by multiplicity. It surveys intelligibles, essences, ideas, in succession, singly, one at a time. It is at arm's length from its object; it is not one with what it

7 "The soul when it deals with matters of knowledge, suffers a certain decline from unity; for knowing is still an act of reasoning; and reasoning is a multiple act which leads the soul down to the sphere of number and multiplicity. The Soul, therefore, must rise above knowledge; above all its wandering from unity; it must hold itself aloof from all knowing, and from all the knowable, and from the very contemplation of Beauty and Good, for all Beauty and Good are later than this, springing from this as the daily light springs from the sun." (VI, 9, 4.)

sees. To see the One is to be the One, and that is not possible in the dichotomy and multiplicity of thought. The One is, indeed, almost as difficult for the soul to conceive as is absolute nonentity or Non-Being. The soul, when it is most itself is most reasonable, that is it is most clearly and impeccably a mind.

It is at home in forms, orders, *logoi*, ideas. The formlessness of infinite perfection, of the undifferentiated One, no less than the formlessness of nonentity, leave it balked and frustrate. Mind can only understand its similar; strictly it can only understand itself. Intelligence can only understand Intelligibles. But the one is beyond Intelligibility as it is beyond Being. It cannot be known as Ideas are known, understood as the mind understands and surveys in succession separate and single essences. The One can be grasped only when mind possesses completely what it has long striven toward, becomes possessed utterly by the object of all thought and the source of all Being. Complete attainment of the transcendent One is possible only when the object seen is not sundered from the seeing object or the process of seeing. When there is complete unity with Unity, there is unqualified fusion; being and thought, always identical, are both lost in the instantaneous and eternal ecstacy of union. The Absolute Mind, considered not in its constituency of thoughts, but in its absolute being, has the One as its absolute object. But it is still sundered from the object of its thought, the goal of its striving, the light of its love, though its being consists in its holding steadfastly toward the vision of these.

The business of the soul is to become completely assimilated to that primal unity of which it is a tertiary manifestation. Its first problem is to become purged of fleshly corruption and earthly circumstance. This it accomplishes

by the freeing discipline of the virtues. It becomes then tempered by dialectic into a flawless living of intellection through which it comes into perfect consonance with the Intellectual Principle. But how is the soul to pass beyond that principle to that transcendent and unitary perfection from which that principle itself is derived? "With pure intellection," says Plotinus, "and by the topmost puissance of the Intellectual Principle, we shall contemplate the All-Pure."

The first essential in passing to ultimate union with Unity is, for Plotinus, to become one with one's self, to become integrated. "To the pure all things are pure," and to them only. Only to those themselves an integrity of spirit, is there possible integration with the One. The soul has within limits attained unity when it has sloughed off the corruptions of the world and of the senses, and mounted into clear intellectual coincidence with the Absolute Mind. But it must pass beyond that if it is not to remain at one remove from the Ultimate. It must cease to categorize and dichotomize; to pass from essence to essence, to hold itself an aloof subject sundered from the objects of its contemplative intuitions. It must gather itself into a unity that precludes analysis. Arrived at a clear concentration, at the heart of its own lucid being, it will find that it has ceased to be, being one with the Unity which Being implies and from which it flows.

Plotinus recognizes the difficulty of all mystics. All articulation is a matter of distinction and analysis, and a perfection of vision in which the distinction between thinker and thought is obliterated and the meaning of being lost, cannot easily be put into words. Plotinus is trying, vainly, as he admits, to describe the indescribable. For description is a matter of categories and distinctions, and the unity of the ultimate union is that implied perfection upon

the thereness (one cannot say being for being is identical with thought) on which categories and distinctions depend. He is trying to convey a sense of that rare eventuality when thought has strained so far and so successfully that it *is* what it thinks. The individual mind is so possessed by its vision and so completely possesses it, that they are indistinguishable from each other, and both from the process of vision. He is describing the rapture and finality in which thinking annihilates itself. But it is the annihilation of absorption, when the thinker is lost only in the sense that he has completely found himself in the hitherto external and alien object of his logic and his love.

To become one with unity is not to become lost. Self is the source of all things. But the sight is so clear that consciousness, it is true, is no longer and self is no more. But they are at last united with what they have always been in origin; they are seeing and being the light which they do not even know that they see. The loss is simply the losing of one's light in a universal flame, the obliteration of thinking, love and adoration in the objects thoughts loved and adored. It is the musician become one with his music, the dialectician with his dialectic, the lover with his love. It is life and thought, always in Plotinus identical, passed into the rapture of attainment, existence turned into ecstacy.[8]

The mystic rapture, "the flight of the alone to the alone"

8 Hence it is that we read of "Greatness not to be spoken of, not to be written. If we here speak and write, it is but as guides to those that long to see; we send them to the Place itself, bidding them from the words to the vision; the teaching is of the path and the plan, seeing is the work of each soul for itself. Some there are that for all their effort have not attained the vision; the soul in them has come to no sense of the splendor there; it has not taken warmth; it has not felt burning within itself the flame of love for what is there to know, the passion of the lover resting on the bosom of his love. They have received the authentic light; all their soul has gleamed as they have drawn near; but they come with a load on their shoulders which has held them back from the place of vision." (VI, 9, 4.)

is not, in Plotinus, an escape from thought. Only those can reach it who pass through the cold path of dialectic as far as dialectic can reach. Thought is pressed to its last term and ideal. Not the process of discourse, or the succession of thoughts, separated from each other in essence and from the mind which beholds them. These are not what Plotinus conceives to be the perfection or the fruition of thinking. These are its incidents, its failures, its stammerings toward attainment. Involved in thought is the unity beyond it; guiding and goading the thinker is that unity which, so long as he stays in the realm of analysis, he cannot reach.

It is thus the implication of a unity beyond thought that causes Plotinus to insist that the thinker must, if he is to reach the ultimate, pass beyond thinking into an ecstacy of identity and vision. But the One is something more than the posited perfection of intellectual experience. The One, as has been already suggested, is not simply the clear completion of vision aimed at by the thinker, it is the central source of beauty sensed and sought by the artist, the ultimate and original flame of love in which the lover invited by its remote visible embodiment, unwittingly wishes to be wrapt. It is that Good which is the goal of human virtue and the unmoved mover toward which the whole creation moves, and is moved to return. It is the end of all action and endeavor, logical, moral and aesthetic, as it is the source of all that is. It is the unitary origin of the True, the Good and the Beautiful. It is the implicit terminus of all the lovers of these three, which are the variants of that final One.

It is difficult to describe the status of the One in Plotinus' system. "Language," as he himself says, "fails for an adequate discussion of the transcendent, much less for defining it." (VI, 8, 8.) But he does succeed in making

it clear that it is the transcending perfection from which all else flows and for which all else thirsts. Whatever aspect the final good may take for the soul lost in sense or recovered to reason, that good is derivative from the One. It is what the musician detects beyond the harmonies of music, the flame that animates for the lover the comely form of the beloved, the intimacy of vision which is the ideal and end of the thinker in his thought. It is the moral apotheosis, as it is the ontological source of Plotinus' system. Whether one comes back to it initially through the incitement of love or music, or the self sustaining momentum of thought, the end and fruit is a moral apocalypse, a radiance too engulfing to find utterance, a happiness too complete to be, in the pedestrian sense, clear.

A mystic like Plotinus cannot be dismissed from the courts of reason because his metaphors are inaccurate or clumsy, or because he cannot make language adapted to analysis serve as a description of ecstacy. He has conscientiously pushed analysis to the last irresistible implication of something that lies beyond it. In the positing of that transcendence he is giving logical expression to a nice psychological perception. It needed no Bergson to point out that language, logic and science are all merely discourse, discursive dissections of undissectably unified realities. Plotinus is trying to find a status for the whole, the individual integrity, the encompassing and absorbing unity of experience as it comes to those who have experiences, and not the verbal post mortems of them. He is impressed as a sensitive and imaginative thinker would be, by certain types and recurrences of experience, those heights and intensities of affection, of art, of intellect, in which analysis is irrelevant, time meaningless, and being transcended. He is trying to show us our way home; to indicate how we may touch immediately and behold that reality which we adum-

brate in all our roundabout discursive or contemplative thinking, the essential fountain of the spirit which we feel bubbling up at the heart of all our loves, the inciting flame behind all our aesthetic fervors and discriminations. It is hard to follow him literally beyond this point. He converts the summits and crises of moral, aesthetic and intellectual experience, into the bases and origins of all experience and existence. In his passionate though austere mythology, the ultimates of art, passion and thought are not simply the final flowers but the original roots of all experience and all being. That is for the modern reader, especially one trained in the naturalistic tradition, not only mixed metaphor but mixed metaphysics.

But if that is a naive ontological inversion, it is a symptom of moral sense and certainly of moral sensibility. It requires no great generosity of imagination to conceive of a universe in which all the imperfections that there are are simply diminutions or degenerations from the Good by virtue of some incarnation of which they are at all. In such a universe the aim of the soul would reasonably be that of recovering its own clear essence, of becoming finally one with the Good which shone corrupted through the refractory matter of the world, and lingered feebly in it. The soul in a world so conceived would find the ideal it envisaged more or less clearly in itself, in the incarnation in itself of the ideal that truly consituted reality. It would recognize the good when it saw it, and feel, as Plotinus himself suggests, a magic kinship with all souls since they were all choral members of the same dance of life and beauty and truth. It would recognize the Good or reality most surely in those passionate interludes of experience when the ideal and the empirically real were fused, when mind and body were become the clear mirror of perfect light, the faultless momentary sounding of flawless eternal

music. It would find such perfection most in the life of thought, where the clear beholding of clear essences was immune and independent of the fluttering fatality of time. But even here it would feel a loss, a severance, and incongruity; its most intimate earthly experience of perfection would be in moments of ecstacy of thought, love or art. Then the clear structure of thought, the impeccable harmony of form, the unique felicity of a beloved presence, are gathered into a unity, and that unity to one's self. Then, if only for a moment, one would be at one with the ideal, instantaneously and forever. The soul would have recovered itself from the disintegration of time and nonentity; it would have risen to its full stature, the life of eternity. It would be most alive and real because it was at last at home in reality.

So far as one can see, looking at it from the standpoint of a mechanistic science and a biological psychology, we are not living in such a world. Reason and rapture are incidental, precarious, happy complications of mechanism and animal life, not the cause and being of the universe. But it is well for us to enter at least imaginatively into the Plotinian universe. It is liberalizing to conceive that morally speaking, the world of practice and of passion are corruptions of divinity. It is essentially sound that we conceive the business of our lives to be that of cultivating in us that imprint of idealism which alone gives us a characteristic life, and to believe that it is only by deepening that imprint that we may recognize by what it was imprinted, the ideality that is the heart of all things and is their source. Shall we call this metaphysical assertion of a moral idealism courageous or pathetic or foolish? Perhaps, in the light of all the available disillusioning facts, all three. But it is the most eloquent statement, perhaps, of the idealistic faith that has ever been made: the sheerest

thought is the sheerest life. All the rest is dross and silence. And the completest thought merges into that identity of union and rapture which life and love and art sometimes provide for an instant, instants which are types and symbols of eternity.

By this Way that leads to the Good, the soul finds itself; when it is the divine it is truly itself, no longer a thing among things. It abandons Being to become a Beyond-Being; when its converse is in the Supreme. He who knows himself to have become such, knows himself now an image of the Supreme; and when the phantasm has returned to the original, the journey is achieved. Suppose him again to fall from that vision, he will call up the virtue within him, and seeing himself all glorious again, he will take his upward flight once more, through Virtue to the divine mind, through wisdom to the supreme. And this is the life of the Gods, and of Godlike men, a life without love of the world, a flight of the Alone to the Alone. (VI, 9, 11.)

DUALISM IN CARTESIAN PSYCHOLOGY AND EPISTEMOLOGY

Albert G. A. Balz

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The purpose of this paper is to trace the effects of the dualism of substances on Descartes' epistemology and psychology. Attention will first be directed to a brief consideration of Descartes' relation to scholasticism, for the purpose of showing the imperfect character of his break with traditional doctrine, and to show, further, that this break did not come all at once. The position expounded in the "Rules for the Direction of the Mind" will be discussed in illustration of these statements. Next, the attempt will be made to characterize the modulations in the philosopher's thought leading to his later position, with especial emphasis upon the influence of the ontological dualism in bringing about the change of standpoint. The uncertainties and ambiguities of his psychological and epistemological principles will be examined with a view to establishing that his inconsistencies are in part traceable to a preservation of a certain amount of scholastic doctrine in a new and foreign setting, and in part due to the operation of the dualism of substances. It is to be noted from the beginning that the dualism was not merely a presupposition and a cause of peculiarities of doctrine and of inconsistencies, but that this dualism was made more congenial by other considerations so that, in effect, the dualism was both cause and effect. Finally, the involution of the dualism in the

* The writer wishes to make acknowledgement of his indebtedness to Professor John Dewey for valuable suggestions and criticisms connected with the thesis of this essay.

details of Descartes' psychology and epistemology will be examined in some detail.

I

Descartes' break with Scholasticism was by no means thorough-going, nor did his rejection of scholastic conceptions come all at once. Many peculiarities of his philosophy spring from the fact that he was, on the one hand, so largely engaged in renovating scholastic ideas and commonplaces to new needs, and on the other, from the fact that his work of adjustment, selection, and rejection occupied a number of years. He did not leap from scholasticism to his full-blown, so-called "modern" point of view.

First of all, we are to consider some features in his modification of scholasticism. His duality of substances is an example of a far-reaching modification of a scholastic doctrine. The characteristic mediaeval doctrine of a hierarchical arrangement of substances is transformed into a duality. There were various forces occasioning this change, but doubtless one of the most important was the growing mechanical and mathematical conception of nature. The mediaeval hierarchy stretched from matter with a minimum of form to pure form; or confining attention to form alone, the series of forms went upwards to culminate in God as pure form. The mediaeval doctrine did not remain consistent. The Aristotelean conception of matter and form is crossed by a distinction which embodied different interests and purposes, namely, the distinction between matter and spirit. The two sets of conception cannot without more ado be identified. The distinction between matter and spirit is especially fostered in the Neo-Platonic and Augustinian circles, with much of its force and bearing derived from religious and mystical influences. The two sets of ideas have, or come to have, some congeniality, al-

though the question as to how far this affinity is implied by Aristotle himself may be uncertain. The antithesis of matter and spirit is a resultant of a lengthy historical movement. And if we wish to see its source in Plato, we must see there only the beginning of the movement. There is good reason for looking upon St. Augustine as particularly influential in turning the distinction in the direction that culminates in the Cartesian dualism of substances. But the fact that the concepts of matter and form are not simply identifiable with the antithesis of matter and spirit is demonstrated by the struggle between the sets of conceptions in the works of St. Thomas Aquinas.[1] Stated briefly, this struggle took the form of a competition between a tendency to frank dualism, within man and the universe, and the tendency to maintain the serial arrangement of the hierarchy of forms. On the one hand, there are many substances, and each is matter and form (except the divine being); on the other, the hierarchy shows signs of its instability, and it remained for Descartes to solve the internal conflict by precipitating the dualism. At any rate, in mediaeval philosophy the forms come to possess more and more a spiritual connotation, and in God at least pure form and pure spiritual substance tend to coalesce.

The new scientific viewpoint, resting on a quantitative conception of matter and putting its faith in mathematics as the instrument for the mastery of matter, displaced the older concept of form and supplanted it with notions of a mathematical character. It is obvious that the more radical the disconnection of forms from matter, the more easy the identification of form and spirit. The equivalence of form and spirit becomes unavoidable. The world of pure forms — heavenly beings — becomes a world of spiritual

1 The writer has tried to show this in some detail in the Journal of Philosophy, Psy., and Sc. Methods, vol. 15, nos. 8, 9.

substance, opposed to matter. Man's composition, not consistently stated by Aquinas, now becomes unmistakable. Standing somewhere between mere matter and heavenly beings, he is looked upon as composed of two equipollent substances.

Descartes fixates this duality. It is with him primarily a presupposition of thought rather than an outcome. Soul is not taken as the substantial form of body, as in many scholastics, but is a substance. Body is also a substance in its own right and does not owe its substantiality to the soul. The scientific movement has disclosed the fact that matter has a structure of its own — a structure not derived from a formative principle, which is in some sense non-material. So matter no longer requires the complementary concept of form in order that it may be conceived as organized, and so in Descartes the scholastic "*forma corporeitatis*" is dispensed with. The organization of matter is the result of the mechanism of nature — or is the fact of that mechanism. But correspondingly, a certain liberation of spiritual substance occurs. Pure form, or as it now appears, spiritual substance possesses its own indwelling energies. Or, more accurately, the soul had all along been in possession of intrinsic energies, but now the notion of such powers is freed from the ambiguities arising from the partial character of the identification of spiritual substance and form.

Descartes thus comes to offer a dualism of substances. The two substances differ so radically that the predicates of the one are the contradictories of the predicates of the other. Substance is defined as "that which can exist by itself, without the aid of any other substances."[2] These substances are mutually exclusive, for "from the mere

2 Reply to Objections, 4, vol. 2, p. 101, *Phil. Works of Descartes*, trans. by Ross and Haldane. Except where otherwise stated, references are to this translation.

fact that I apprehend one substance clearly and distinctly apart from another, I am sure that the one excludes the other.''[3] How thorough is this exclusion is indicated by Descartes' remark that ''reciprocal exclusion of one another belongs to the nature of substances.''[4] The soul, or thinking-substance, is non-extended, indivisible, imperishable, incorporeal, spiritual, and uncompounded. Body is extended, divisible, perishable, corporeal, and compounded. By virtue of the existence of only two substances, the one can be defined by its total unlikeness to the other.

To whatever extent we credit Descartes with precipitating the dualism in this stringent form and so surpassing his predecessors, and however true it is that the dualism is demanded by his other views and purposes, it remains true nevertheless, as a matter of emphasis, that the duality of substance operates primarily as a ruling presupposition. The future course of his thought is largely characterized by an increasing consciousness of the requirements laid upon him by this preliminary principle.

In still another way Descartes reveals his scholastic antecedents. He does not reject in toto the scholastic psychology. On the contrary, he takes over that psychology but seeks to adapt it to the new situation. The adaptation must be two fold: on the one hand, the older psychological principles must be changed to fit the dominant conception of the dualism of substances, and on the other, must be adjusted to the mechanico-mathematical conception of nature. And this task carried with it still another revision.

This further revision relates to the traditional doctrine of correspondence. The scholastic psychology, as a general matter, was based on the twin conceptions of matter and form. The form of the object, the species as realized in

[3] *Ibid.*
[4] *Ibid.*

the material object had its correspondence in the form or species as realized in inter-organic potentiality. The correspondence of the one with the other was taken as an accepted fact. But this cognitive correspondence becomes much less intelligible when it falls within the framework of an ontological dualism. For on the one hand, the form of the object disappears, in the older accepted sense of form; mathematical considerations take the place of form; or, what amounts to the same, form is now interpreted mathematically. On the other hand, the mental form is now in a substance of a character wholly different from the physical object. Besides this, the growth of the scientific mode of thought displaced formal and final causes and adopted efficient causation instead. So the cognitive correspondence of mental form and object gets entangled on the one hand with the *causal* correspondence of the object with the sensations which that object produces and which move the body to act upon objects; and on the other hand the cognitive correspondence ceases to be a correspondence of an internally realized form with the form inherent in things. The correspondence is not of form with form at all, but of spiritual process with physical structure, of a mental idea with bodies constituted of atoms. If there is still to be correspondence, the nature of the correspondence must show a radical change. Perception and thinking therefore must be interpreted on the basis of the interaction of mind and matter substance, and the correspondence of idea and object explained by causal connection.

We have implied that the effects of the doctrine of equipollent substances did not appear all at once in Descartes' thinking. If it is possibly misleading to attempt to discriminate sharply between two periods or stages in his thought, it is certainly true that the influence of the

dualism has a history that can be traced. In the "Rules for the Direction of the Mind" we have Descartes' kinship with scholasticism in its clearest manifestation. We shall therefore consider the doctrine of that essay, presenting the position therein as the point of departure from which to trace subsequent transformations of his thought.

The fundamental position occupied by the ontological dualism, and its presuppositional character, is revealed in the "Rules." Descartes consistently maintains in this work the utter dissimilarity of the thinking power proper and corporeality. Imagination, for example, is asserted to be a bodily function, while pure thinking is wholly uncontaminated by body. ". . . that power by which we are properly said to know things, is purely spiritual, and not less distinct from every part of the body than blood from bone, or hand from eye": "among corporeal things there is nothing wholly similar to this faculty" (i.e., cognition).[5]

Throughout the "Rules" Descartes is consistent in maintaining that the understanding is the sole knower. For the purpose of knowledge of facts he says, there are "four faculties only which we can use for this purpose, viz., understanding, imagination, sense, and memory. The understanding is indeed alone capable of perceiving the truth, but yet it ought to be aided by imagination, sense, and memory, lest perchance we omit any expedient that lies within our power."[6] Sense, memory, and imagination are therefore instruments for the understanding in dealing with material things, but properly speaking are not cognitive faculties in the narrow sense. This utilization of sense and imagination, however, is confined to knowledge of fact or of physical things. These faculties, being corporeal, are intimately involved when cognition is directed towards the

[5] *Rules*, etc., pp. 38-9.
[6] *Ibid.*, p. 35.

world of extension. But this knowledge of physical things is of a secondary or derivative character, however great may have been Descartes' interest in furthering the march of the sciences of nature. And this situation exists because of Descartes' affiliation with scholasticism.

Descartes inherited the tradition that knowledge was knowledge of form, and the highest knowledge was knowledge of pure forms, of essences. The principle that like was known by like, which was not doubted, involved the position that the form actualized and realized in thought through the agency of imagination corresponded to the form as realized in material things without the body. The mental form which corresponded with the form of the material object was not the object of knowledge but the means of knowledge. It is only by reflection upon knowledge, according to Aquinas, that we become aware of the mental form as means. The object of knowledge is things, or, in the last analysis, pure essences of which things were but faint adumbrations. The mind grasped the object in the act of apprehension, and this act was unique, immediate and ultimate.

The question may be raised as to why scholasticism did not appreciate the difficulties in this conception of the mind as immediately apprehending the object. The problem did not arise, apparently, in an urgent form. The question of how a spiritual act could seize cognitively an un-spiritual thing would not be recognized as a difficulty to be overcome except in so far as the duality of the mind and its objects was explicitly accepted. But, as we have seen, the situation was not for scholasticism as unambiguous as this. The problem tended to arise in so far as scholasticism tended towards the dualistic conception. But this tendency was checked and countered by the matter-form conception. This conception made mind and objects

congeners in some measure. The vibration between mind as form and as spiritual, and between things as merely material and as composed of matter and form, is sufficient to obscure the question. The problem of how the spiritual act can be cognitive of a thing of antithetical nature does not arise because the antithesis is latent, and not patent. There is no problem here for scholasticism any more than that there resided a legitimate problem in the fact that a spiritual God knew the finite world. The activity of mind and the mind's character had sufficient affinity with things to make the knowledge function seem natural enough. No bother was then made over the spiritual cognitive apprehension of the species for the sufficient reason that no difficulty was apparent. If the difficulty appeared sporadically, it was hardly characteristic of the spirit of scholastic philosophy to be vitally affected by it. The obstacle could be elided by a sufficing reference to divine plan or mystery.

Sooner or later, however, the question as to how a spiritual cognitive act could apprehend an object must confront Descartes. At first the problem does not arise from him in any critical fashion. But as the effects of the ontological dualism coupled with the demands of the new scientific thought become manifest the problem presses upon him. The dualism that is implicit in the traditional theory of like being known by like becomes explicit as Descartes carries out a correspondence theory in the setting of the ontological dualism.

In the "Rules" knowledge appears as a dualism of purely logical character. By intuition we obtain possession of logical self-evidents, or elements that are logically irreducible. "By *intuition* I understand, not the fluctuating testimony of the senses, nor the misleading judgment that proceeds from the blundering constructions of imagination,

but the conception which an unclouded and attentive mind gives us so readily and distinctly that we are wholly freed from doubt about that which we understand. Or, what comes to the same thing, *intuition* is the undoubting conception of an unclouded (*purea*) and attentive mind, and springs from the light of reason alone."[7] First principles are given by intuition alone. The faculty of intuition is called "mental vision," the "inborn light," the "inner light," or the "light of nature." This faculty is universal in man, though often its vision is obscured by various intellectual ailments. This faculty must surely be that to which Descartes refers in the famous opening sentences of the "Discourse on Method": "Good sense is of all things in the world the most equally distributed, for everybody thinks himself so abundantly provided with it, that even those most difficult to please in all other matters do not commonly desire more of it than they already possess." Whatever of irony there is in this sentence is not meant to cast doubt on the universality of this "good sense," but upon the infrequency of its occurrence in purified form. For Descartes adds: "It is unlikely that this is an error on their part; it seems rather to be evidence in support of the view that the power of forming a good judgment and of distinguishing the true from the false, which is properly speaking what is called Good Sense or Reason, is by nature equal in all men."[8]

This faculty of discriminating and immediate apprehension is directed towards the absolutely simple, the realm of pure essences, which are logically irreducible. "I call that absolute which contains within itself the pure and simple essence of which we are in quest." ". . . there are but few pure and simple essences, which either our

7 *Rules for the Direction of the Mind*, p. 7.
8 *Discourse*, etc., vol. 1, p. 81.

experience or some sort of light innate in us enables us to behold as primary and existing *per se*."[9] These logical simples are also the first principles which form the basis of a deductive system of knowledge and guarantee its certainty.

These logical essences are, of course immaterial. But at this place, the immateriality and ideality of the logical simple must be understood by bearing in mind the scholastic background of the matter-form schematism. The idea, in orthodox mediaevalism, is always immaterial, but rather in the sense of the immateriality or incorporeality of form than in the sense of an unextended spiritual thinking substance. The term "idea" in scholasticism was generally reserved for ideas in the divine mind, which meant pure form. At this stage in Descartes' thought, the scholastic connotation derived from the contrast of matter and form is predominant, and this connotation must be conserved in interpretation. If we ask how the mind can know these ideal entities, the answer is that according to Descartes when the mind deals with the immaterial — with forms and essences — it can take the lead and operate independently. It is, so to speak its own energy; its propulsion lies within itself. The logical essences are congeners of mind, indigeneous to thinking as an ideal energy. Throughout the "Rules" there is no wavering from the position that the understanding is the sole knower. The corresponding proposition is given in the statement that "experience is unambiguous only when dealing with the wholly simple and absolute,"[10] and that "in the strict sense truth and falsity can be a matter of the understanding alone, though often it derives its origin from the other two faculties."[11] Un-

9 *Rules*, col. 1, pp. 15 and 16.
10 *Rules*, p. 24.
11 *Ibid.*, p. 25.

derstanding is the very faculty of thinking and the inward source of knowledge.[12] "Nothing can be known prior to the understanding, since the knowledge of all things else depends upon this and not conversely."[13] Since the object of understanding is the essence or ideal simple, "all knowledge is of the same nature throughout, and consists solely in combining what is self-evident."[14]

In knowing the ideal simple, accordingly, not merely is understanding independent of sense, memory and imagination, but it would really be hampered by them. "For, since the understanding can be stimulated by the imagination, or on the contrary act on it; and seeing that the imagination can act on the senses by means of the motor power applying them to objects, while they on the contrary can act on it, depicting on it the images of bodies; considering on the other hand that the memory, at least that which is corporeal and similar to that of the brutes, is in no respect distinct from the imagination; we come to the sure conclusion that, if the understanding deal with matters in which there is nothing corporeal or similar to the corporeal, it cannot be helped by those faculties, but that, on the contrary, to prevent their hampering it the sense must be banished and the imagination as far as possible divested of every distinct impression."[15] The first stage of the disruption of the scholastic hierarchy into two substances leaves mind and understanding, and the whole system of ideal forms, in one related sphere.

That immediate grasping of essence, which is called intuition, affords underived certitude. ". . . two things are requisite for mental intuition. Firstly, the proposition intuited must be clear and distinct; secondly, it must be

12 Cf. *Notes Against a Programme*, p. 434.
13 *Rules*, pp. 24-25.
14 *Rules*, p. 47.
15 *Rules*, p. 39.

grasped in its totality at the same time and not successively.''[16] We distinguish mental intuition from deduction ''by the fact that into the conception of the latter there enters a certain movement or succession, into that of the former there does not. Further deduction does not require an immediately presented evidence such as intuition possesses; its certitude is rather conferred upon it in some way by memory.'' When we perceive the truth of propositions by running over them in a progressive movement we know deductively; but this deductive movement can be checked up and certified by an act of intuition, an immediate apprehension of the proposition. ''The upshot of the matter is that it is possible to say that those propositions indeed which are immediately deduced from first principles are known now by intuition, now by deduction, i.e., in a way that differs according to our point of view. But the first principles themselves are given by intuition alone, while, on the contrary, the remote conclusions are furnished only by deduction.''[17]

By pairing our intuitions of the logical essences, we proceed demonstratively, by deduction deriving new propositions from the paired intuitions, subsequent intuitions corroborating results. This is the whole of method — the discovery of the absolutely simple essences or logical self-evidents by intuition and then the deductive demonstration leading to other propositions. ''Method consists entirely in the order and disposition of the objects towards which our mental vision must be directed if we would find out any truth. We shall employ it exactly if we reduce involved and obscure propositions step by step to those that are simpler, and then starting with the intuitive apprehension of all those that are absolutely simple, attempt to

16 *Rules*, p. 8.
17 *Rules*, p. 8.

ascend to the knowledge of all others by precisely similar steps."[18] The propositions so attained are "relative," by which is meant that which "while participating in the same nature, or at least sharing in it to some degree which enables us to relate it to the absolute and to deduce it from that by a chain of operations involves in addition something else in its concept which I call relativity (*respectus*)."[19] By this "relativity" Descartes seems to intend remoteness from, and logical dependence on, the simple intuited first principle, the absolute which "contains within itself the pure and simple essence of which we are in quest."

Knowledge is therefore grounded on the apprehension of essences, which constitute the immutable first principles, and alone give certainty to the results of the deductive process. Now there is an interesting question concerning the genesis of Descartes' doctrine that confronts us here. Why does Descartes begin with the essence? Assuredly through Descartes' philosophy his general aim is to develop an unshakeable foundation for knowledge of the world and nature. But why does he approach the problem of knowledge of nature from the standpoint of the immediate apprehension of logically simple essences?

There are two points to be considered in answering this question in its proper historical perspective. In the first place, this doctrine of essence in one sense is his congenial standpoint because of his scholastic antecedents. But the essences for him are no longer directly manifestations of things or the indwelling form of things contemplated by the mind as a result of the abstracting activity of the active intellect. And they could not retain their original scholastic status because of the interlocking of a second interest with

[18] *Rules*, p. 14.
[19] *Rules*, p. 16.

his scholastic antecedents. The new science of nature stripped nature of dwelling forms. The older sensory forms were obsolete. Whatever form physical objects possess is mathematical. Natural objects possess structural principles in their own right, and not because their true being is the result of a structure in some sense impressed upon or conferred upon a structureless stuff or matter from without. Of these structural characteristics a mathematical account could be given. Hence the traditional reverence for forms of sensory qualities such as levity, gravity, the moist and the dry, is obsolescent and these forms, are not utilizable as explanatory principles of physical phenomena. So while on the one hand, the doctrine of essence is congenial to Descartes, on the other hand it is radically changed because of his participation in the new scientific doctrines.

The result is that for Descartes the new principles could not be, as in the older science, the realization of what is implicit in sense perception, for mathematical formulae were to supplant the forms of sensory qualities approved by tradition. Since the forms were excluded from physical nature, the first principles or essences could not be reached by a process of refining the sensory forms. But then the question arises: why does Descartes not reject the doctrine of essences in toto? The answer to this question gives the other side of the situation. Descartes was confronted with a problem somewhat analogous to that which Hobbes had to surmount. The relation of the physical object to the organs of perception is, in terms of the new science, a causal relation. The shedding off of the image-species disappears with the giving up of sensory forms. Hobbes saw that sense-experience is on the new basis a set of effects, and knowledge of nature based on sense-experience had to be attained by passing from effects to causes, and this gave probability and not certainty. But science is and must be not con-

jectural but certain knowledge, and hence means reasoning from causes to effects. Now Descartes could not start with sense-experience based on the causal relation of object (stimulus) and sense-organ, for certainty did not lie on that road. Therefore we must start with essence in the shape of the logical simples grasped immediately by a mind in which the light of nature was undimmed by received opinion so that it could function in the ideal sphere of ultimate essences. To have started with the forms of sensory qualities would have upset the whole scheme of the new science. To have given up entirely the ideal sphere of essence, the realm naturally congenial to mind, would have necessitated the sacrifice of certainty for the new science. Thus the involution of the scientific movement in the scholastic system of ideas leads Descartes to the problem of relating the sphere of essence to that of physical existence.

The truths of essence concern an ideal and immaterial system. How are we to pass to physical existence? It must be remarked here that this question of course falls within the ontological dualistic scheme. But at the stage of Descartes' thought under consideration the problem of the relating of the one sphere to another has almost exclusively the purely logical form of the connecting of the intuited ideal and immaterial logical entities to physical existence. The question is one of conferring, so to speak, the certainty of logical immediacy upon knowledge of the world of nature. And the meaning of spirit has the connotation of the ideal, the immaterial, and the logical.

Now the difficulty in conferring the certainty of essence upon the knowledge of nature is surmounted by Descartes' theory of imagination, as it took form at this juncture. The problem takes the shape of showing how and why sensations and images can be subsumed *under* the deduc-

tions from essence. If this is possible, knowledge based on sensations and images becomes necessary knowledge; or, at least, they assume the position, in some way more certain than in purely conjectural knowledge from effects to causes, of existential exemplifications of theoretically necessary conclusions.

In the "Rules for Direction" imagination is treated as a phenomenon of corporeality, and the explanation of its nature is purely physiological (Cf. Rule 12). We find such expressions as "corporeal idea" and "fancy is a genuine part of body." Imagination denotes the process by which the image traverses the route from sense-organ to "common-sense," there to be apprehended and cognized ". . . while the external sense is stimulated by the object the figure which is conveyed to it is carried off to some other part of the body, that part called the common sense, in the very same instant and without the passage of any real entity from one to the other."[20] ". . . the common sense has a function like that of a seal, and impresses on the fancy or imagination, as though on wax, those very figures and ideas which come uncontaminated and without bodily admixture from the external senses."[21] Now the "image" of Descartes is a lineal descendant of the scholastic "species." It is the object of knowledge. "In the matter of cognition of facts two things alone have to be considered, ourselves who know and the objects themselves which are to be known. Within us there are four faculties only which we can use for this purpose, viz., understanding, imagination, sense, and memory."[22] When the "genuine part of body" called fancy acquires "the practice of retaining the impressions for sometime," we call this faculty of fancy

20 *Rules*, p. 37.
21 *Rules*, p. 38.
22 *Rules*, p. 35.

by the name of memory.[23] The four faculties which we have within us then reduce to two, understanding and imagination. Understanding is "that power by which we are properly said to know things" while imagination is that power which gives us the particular objects of knowledge. ". . . if the understanding deals with matters in which there is nothing corporeal or similar to the corporeal, it cannot be helped by those faculties (imagination and sense) . . . . But if the understanding proposes to examine something that can be referred to the body, we must form the idea of that thing as distinctly as possible in the imagination." [24] When the objects of knowledge are physical existences, that is, it is imagination that presents these things to us; the object of knowledge relating to external things is therefore the image.

Now Descartes undoubtedly felt the urgency of explaining how the image could be subsumed under the deductions from intuited simple essences. The problem involved such an interpretation of the nature of the image that this subsumption could be understood. The direction in which the answer is found is indicated by the mathematical conception of nature. The scholastic species, emanating from the object, was in itself incorporeal form. Imagination was not for scholasticism a mode of consciousness, but an object; the image was a form in a mediate stage of discrimination, somewhere between the species as received by sense, and the form as comprehended by the active intellect. Now the Cartesian image in the "Rules for Direction" is the scholastic species as the object of knowledge. But the sundering of the twin concepts of form and matter necessitates a changed conception of the species. The "form" of physical objects is now geometrical in character. Hence the Car-

23 *Rules*, p. 38.
24 *Rules*, p. 39-40.

tesian image is essentially a figured thing, a geometrical entity. This at once puts the image in harmony with things of extension. For physical existents are extended, and so in their nature geometrical. But this also facilitates the subsumption of the figured image under the essence. For if it is not true that all essences are mathematical entities, at least some are, and it is these mathematical essences particularly which ground the new science of nature. So the image (and therefore the extended object) being figured, it is homogeneous with the fundamental logical and mathematical simple natures, and so the applicability of the latter to physical existence is guaranteed.

Sensory qualities and images are, at least as knowable and as possible objects of certainty, configurations. Thus we are told that "we perceive in virtue of passivity alone, just in the way that wax receives an impression (*figuram*) from a seal. And it should not be thought that all we mean to assert is an analogy between the two. We ought to believe that the way is entirely the same in which the exterior figure of the sentient body is really modified by the object, as that in which the shape of the surface of the wax is altered by the seal. This has to be admitted not only in the case of the figure, hardness, roughness, etc., of a body which we perceive by touch, but even when we are aware of heat, cold, and the like qualities. It is likewise with the other senses." We are then told that the "first membranes in the ear, the nose, and the tongue that resist the further passage of the object, thus also acquire a new figure from the sound, the odour, and the savour, as the case may be." "It is exceedingly helpful to conceive all those matters thus, for nothing falls more readily under sense than figure, which can be touched and seen. Moreover that nothing false issues from this supposition more than from any other, is proved by the fact that the concept

of figure is so common and simple that it is involved in every object of sense. Thus whatever you suppose colour to be you cannot deny that it *is extended and in consequence possessed of figure* . . . merely abstracting from it every other feature except that it possesses the nature of figure, we conceive the diversity existing between white, blue, and red, etc., as being like the difference between the following similar figures. . . . ''[25] The language of the section from which the quotation is drawn frankly implies that this is but one way of conceiving of qualities, and so the hypothetical character of the interpretation is admitted. Descartes' thought would seem to be that this is at least as good or a better hypothesis than the scholastic principle of sensory forms, and that even if it is merely an hypothesis, it harmonizes with the requirements of the new way of regarding nature. Yet he feels so strongly at the same time that the hypothesis is demanded by the principles of this science that he immediately retracts his apparent qualifications. For he says at once that it ''is certain that the infinitude of figures suffices to express all the differences in sensible things.''[26]

The image is then a figured replica of the original figure, the physical object. Now we are given the following account of the process involved: ''Secondly, we must believe that while the external sense is stimulated (*movetur*) by the object, the figure which is conveyed to it is carried off to some other part of the body, that part called the *sensus communis*, in the very same instant and without the passage of any real entity from one to the other. It is in exactly the same manner that now when I write I recognize that at the very moment when the separate characters are being written down on the paper, not only is the lower end of

[25] *Rules*, pp. 36-7; italics mine.
[26] *Rules*, p. 37.

the pen moved, but every motion in that part is simultaneously shared by the whole pen. All these diverse motions are traced by the upper end of the pen likewise in the air, although I do not conceive of anything real passing from the one extremity to the other. Now who imagines that the connection between the different parts of the human body is slighter than that between the ends of a pen, and what simpler way of expressing this could be found?'' [27] The image is thus in continuity with the configuration of the stimulating body; this configuration is registered in the common sense. Or, to change the figure, the apparatus of sense-organ and sensory nerves corresponds to the machine which, following with fidelity the outlines of a statue, carves out of the unhewn block the same outlines, thus reproducing the original statue, although, it may be, on a smaller scale. So the sensory process portrays in the fancy the figured image which is a faithful outline of the geometrical form without. This fidelity is indicated in the succeeding paragraph: ''Thirdly we must believe that the common sense has a function like that of a seal, and impresses on the fancy or imagination, as though on wax, those very figures and ideas which come uncontaminated and without bodily admixture from the external senses.'' [28] The account is completed by an explanation of bodily motion following from the reception of the figure. We are told that the ''motor force or the nerves themselves derive their origin from the brain, in which the fancy is located, and that the fancy moves them in various ways, just as the external senses act on the common sense, or the lower extremity of the pen moves the whole pen. This example also shows how the fancy can be the cause of many motions in the nerves, motions of

[27] *Rules*, pp. 37-8.
[28] *Rules*, p. 38.

which, however, it does not have the images stamped upon it, possessing only certain other images from which those latter follow. Just so the whole pen does not move exactly in the way in which the lower end does; nay, the greater part seems to have a motion that is quite different from and contrary to that of the other. This lets us understand how all the motions of the other animals come about . . . also how in ourselves all those operations occur which we perform without any aid from the reason.'' [29]

From the above account it would appear first, that sensory qualities are configurations or configurations of motions; second, that the image is essentially figure, and a faithful copy of the original; and third, the purely corporeal character of the sensory process and imagination is indicated.

But this summary really affords a question of some importance. We may state it in this way: Does Descartes mean that the sensory quality itself is in itself these motions or figures? Descartes clearly uses names denoting qualities as names for what we should call the physical stimulus. But it is difficult to gather Descartes' precise thought on the matter. Descartes obviously is seeking to apply the concepts of the natural sciences to the problem of sense-stimulation and to neurology. But is Descartes making a distinction between the mathematico-physical explanation of the neurological process and the sense-experience proper? Between the visual stimulus, the process in the visual nerves, and the color sensed? Are the two to be identified? The statement that the ''infinitude of figures suffices to express all the differences in sensible things'' is not without ambiguity in this connection. There is no answer to this question, apparently, in the ''Rules.'' The conclusion that seems to be open is just that the question was foreign to our

[29] *Rules*, p. 38.

philosopher's mind at the time, and since the question did not appear to him, there is nothing said about the matter. Yet it is evident that there resides in the situation created by the dualism and his attempt at a physical explanation of the phenomena of sense and imagination the source of problems which must arise for further reflection. For the time being, however, we may lay aside this matter.

In the light of this it would appear that the common criticism that Descartes assumed the applicability of mathematical results, or took dialectical conclusions to have existential validity is hardly fair to him. For at least he did not blandly and stupidly make the assumption. He had, or thought he had, justification for his position in the scientific movement. Matter in general was extension. It was susceptible to mathematical determinations. Scientific results seemed to demonstrate that matter was mathematical in its structure, or, perhaps that whatever structure matter possessed was most successfully formulated in mathematical terms. Hence particular phenomena in matter could be assimilated to deductions from simple essences. But, as noted above, since a number of theoretical deductions could be made and all would yield adequate explanations when applied, physical science retained a certain hypothetical character. Yet, be it noted, while the possibilities of explanation are varied, the possibilities lie within limits which exclude such principles as the scholastic sensible form, or occult qualities, and the like. Whatever the latitude of explanation, quantitative explanation is to take the place of an appeal to qualities.

This came about, as is clear from the above, because of Descartes' preference for the scholastic essence as the sole object of certainty. Therefore we may regard as justified the preliminary statement that it is misrepresenting Descartes to make a sharp cleavage between him and scholastic-

ism, and that it is more accurate to look upon his work, certainly at this stage, as an adjustment between traditional principles and the requirements of a later age with new knowledge and principles.

The Cartesian problem is thus the old one of the relation of the existential particular to the ideal, the universal, the essence. The treatment of the problem is modified by its subjection to the conditions imposed by the ontological dualism and mechanical causation. By regarding the essence alone as the object of certainty, Descartes is all the more encouraged in maintaining the independence of the thinking substance; and not merely his interest in the possible theological results, but also his preference for essence, reinforces his position in maintaining the pure unalloyed spiritual energy of "understanding" as the sole knower.

It is important to observe that while the dualism of substances is presupposed in the "Rules for Direction," its consequences for knowledge have not been enforced upon Descartes' attention. In the first place, he is thinking of the energy of thought as ideal and immaterial, so that understanding operates in a sphere of universals. The interaction of the two substances, especially in the form of the interaction of mind and body, did not intimately concern him; or rather, such interaction of substances was commonly accepted without question. Thus the possibility of the cognitive act apprehending the corporeal image was taken for granted; it was at any rate a congenial doctrine. In general, the interaction of substances was commonly accepted. The fact of interaction is calmly attributed to substances even when there are but two antithetical substances. The intervention of the pineal gland was not appealed to until a later date. The contrast between the ideality of the operations of understanding, which alone knew, and the corporeality of sense and imagination, which

did not know but were at best instruments and agencies that provoked thought, did not cause a troublesome arrest to Descartes' thought, at this stage, at least. Nor does this contrast coöperate with the dualism of substances to develop a problem. Thus we are told that "among corporeal things there is nothing wholly similar to this faculty (of cognition)."[30] The cognitive faculty, or understanding, is ideal (and spiritual it must also be); yet it is quite at home in the corporeal. For this agency, the cognitive power, "when applying itself along with the imagination to the common sense, is said to see, touch, etc."[31] Similarly, "if applying itself to the imagination alone in so far as that is endowed with diverse impressions, it is said to remember; if it turn to the imagination in order to create fresh impressions, it is said to imagine or conceive; finally if it act alone it is said to understand." In short, "the understanding can be stimulated by the imagination, or on the contrary act on it."[32] This seems to mean that the cognitive power is capable of acting alone; then its activities are called understanding and its objects, we may add, are universals, essences. But this power may act in alliance with imagination in order to perceive, remember, or imagine. This does not imply that perception and imagination are knowledge functions; rather, in themselves they are non-cognitive; they furnish materials which perhaps acquire some cognitive status because they are utilized by understanding. And this utilization is most adequately interpreted as the subsumption of the sense-image under the essence. One is forced to conclude that at this point Descartes has not been bothered by the antithesis of substances.

It is above all important to observe that the foundation

30 *Rules*, p. 39.
31 *Ibid.*
32 *Ibid.*

of knowledge as it was conceived in the "Rules" is *logical self-evidence.* Through the inner light of nature we come into possession of that which is logically immediate. These essences, simple natures, are logically irreducible. The ideal energy of understanding finds the essence, and with this as unshakeable foundation, builds up the structure of knowledge, taking the materials furnished by sense. The energy of understanding must be spiritual; and the essences too must be in some sense spiritual. But so far the congeniality of understanding and its ideal objects is, so to speak, a logical affinity; the question of substance is in abeyance. But doubtless the fact that understanding is a faculty of a soul or spiritual substance, and thus of a substance akin to divine substance, operates to facilitate the transference of the term "idea" from its primary reference to the content of the divine intellect (the *rationes rerum* or *formae exemplares* contemplated by the divine being) to ideas in the human mind. For since there is no hierarchical organization of substances, everything ideal and spiritual, or everything in so far as it is spiritual, must cohabit in one sphere of reality. The dualism proved to be unstable, and lead to the distinction between finite and infinite substance. But this change went along with other significant modifications. And especially do we find that with an increasing realization of the difficulties inherent in the dualism there occurs a radical change in method of meeting the demand for certainty in knowledge. The logical immediacy and self-evidence which guarantees knowledge in the "Rules" is supplanted, in principle at least, by *psychological* immediacy.

II

In Descartes' later reflection the influence of the ontological dualism, and particularly the dualism of body and

soul, become of paramount importance. We find first, that he veers from logical to existential and psychological immediacy as the ground of certainty in knowledge; secondly, he begins to think in more and more psychological terms, vibrating between the treatment of idea and image according to the scholastic conception as revised in the "Rules for Direction" and their treatment in terms of the dualism of mind and body; thirdly, the two-substance theory comes to take the form of a double existential mode theory, or works in that direction. Finally, from this results the situation that epistemological questions continually involve references to consciousness and to the psychology of thought, will, feeling, and imagination. As Locke may be said to have become a psychologist somewhat in spite of himself, so with Descartes. On the one hand, sensation, perception, and imagination vibrate between body and soul; on the other hand there is something of a tendency to pulverize the lump-substance of the soul into collections of states. The limits to which Descartes carried these various tendencies are by no means easy to determine, and we must look in the writings of others for the continuation of these tendencies.

It must be admitted that the causes of these changes are perhaps not to be recovered from Descartes' writings. The changes themselves were doubtless slow. In the "Discourse," "Meditations," and the "Principles" we doubtless are given the fruition of a lengthy process of reflection. This much seems to be clear, that to begin an exposition of Descartes' philosophical construction with the position of the "Discourse" is to begin in the middle of things. And although our information concerning the development between the "Rules," assigned to the year 1628, and the publication of the "Discourse" in 1637, is scanty, and a commentator's attempts to motivate the development are

conjectural, we can hardly deny the fact of significant changes in standpoint and emphasis. Moreover, if what follows is in a measure conjectural with respect to motivation, the outcome is there to be noted. And we can observe how in Descartes the problems of epistemology attain a position that rests on a psychology that in turn involves the metaphysical doctrine of the duality of substances.

In the motivation of the changes mentioned above, the first element may justifiably be regarded as an awakening of Descartes to the character and significance of the dualistic view that he had initially espoused. This process may be regarded as a natural development from his original standpoint. It is not necessary to reiterate the movement by which the conception that involved an organic relation of form and matter, that is, of an immaterial (if not "spiritual") principle to a material principle, developed an internal split. Form and matter were, in physical existence at least, complementary principles, each demanding the other. Whatever led to the abandonment of this close-knit relationship, when the sundering process occurs, form or the immaterial principle, becomes opposed to matter, not as a contrasted but complementary principle, but as a direct opposite. Instead of substances that were matter *and* form, we have substantial things that are *either* immaterial or material. One can say either that the ancient term "form" becomes inapplicable, or that its content undergoes a transformation such as that which happens in the case of the term "matter. Matter reduces to a term with a scientific, rather than a metaphysical meaning, and instead of requiring form as its complement, whatever form there is in matter is something germane to matter itself, possessed by matter in its own right. It is structure or geometrical configuration. Now "form" may be regarded as becoming the name of substance; or, expressed differently, the im-

materiality of the earlier conception becomes sprituality, and a separate substance. The forces that pull apart the two conceptions simultaneously effect a change of the one connotation. Two equipollent substances, each with predicates contradictory to those of the other, are the result.

In the "Rules" Descartes seems to have been dominated by the logical significance of the divorced principles. The fact of an immaterial spiritual substance is not as emergent as the thought of the ideal universal; and the problem is not that of the relation of two substances, but of the ideal universal to the existential particular. But the dualism of substances had been instituted, and further reflection would necessarily veer away from the problem as stated in logical terms to the question of the relation of the two substances. And as the question of how the individual might come to know with certainty, how he could escape uncertainty, error, and illusion, took the lead, rather than the problem of how the data and laws of science could be related to the ideal essence, the fact of substantial difference between the knower (understanding) and that which is known must become more pressing. What might be considered as an internal development within the limits set by the dualism took place.

It is of course to be understood that there was interaction of various incentives and considerations; and it is justifiable to wonder whether any priority in causing the change of doctrine can be ascribed to this or that influence. We can only itemize the prompting reasons and insist upon the probability of their conjoint action. So Descartes' increasing sense of the implications of his preliminary dualistic principles is both cause and effect of the new attitude.

A second fact which may be adduced in explanation relates to Descartes' theological interests. The scientific point of view adopted in the "Rules" meant a break with

what had been the scientific point of view of scholasticism, in so far as such a thing may be attributed to it. The newer view divested particular things of their qualities, and simply rendered obsolete the principle of sensory forms. The orthodox science had accepted sense-perception at its face value. Things were explained by erecting their qualities into sensory formative principles — the moist and the dry, for example. But the superseding conception seemed to fly in the face of obvious fact, for qualities, at least secondary qualities and in the end all qualities, were found to be a nuisance rather than explanatory principles. Qualities had to be given a new status; there was no place for them in the world of matter (quantitatively construed), and they came in time to be shoved into the other world of spirit as a somewhat cavalier way of disposing of them. This gave the appearance of a radical difference between what things are and what they are taken to be. There was, so to speak, something of immodesty in exposing the bony framework of Nature by taking off her sensory garb. The offense to Nature did not matter so much — but it was something like offending the deity, which did matter a great deal. Providence arranges that man perceives the world under the form of sense-qualities. But if these sense-qualities do not correctly represent the real structural principles of things, sense-qualities are uniformly deceptive, and the deity is responsible for an incessant deceiving of man. There was bound to be something ghastly and impious in the notion. We know the pains Descartes took in maintaining the innocence of the deity. Here was not an occasional error, for which the individual might be held accountable, but a systematic universal incentive to error. Descartes in championing the new science was exposed to the charge of attributing the deception to the deity. This laid upon Descartes a quadruple task: first, the status of

the sensory qualities had to be determined; secondly, their function in life must be assigned, for Descartes could not have admitted the fact of a vein of irrationality running through the world; thirdly, God must be cleared of any charge of complicity in the erroneous deductions of thought; and finally, the question of certainty in knowledge had to be envisaged in such a way as to take account of the interposition of a veil of sensory qualities between the understanding and things. This latter point is of crucial importance, but it may be dismissed for the moment, to be considered again later.

Another reason which inclined Descartes to his change of position may be suggested. In the "Rules" Descartes assumes the immateriality of the soul but he does not trouble about elaborating reasons for the position. Perhaps the truth is that at that time he was thinking more of the soul in terms of the conception of form than as a spiritual substance; he is content with the bare statement of separation of body and soul. But in later writings Descartes seems to feel the need of demonstrating the immateriality of the soul — at least from Descartes' point of view it is a demonstration. His appeal is to clear and distinct ideas, and the method of doubt. ". . . I saw that I could conceive that I had no body, and that there was no world nor place where I might be; but yet that I could not for all that conceive that I was not. On the contrary, I saw from the very fact that I thought of doubting the truth of other things, it very evidently and certainly followed that I was; on the other hand, if I had only ceased from thinking, even if all the rest of what I had ever imagined had really existed, I should have no reason for thinking that I had existed. From that I knew that I was a substance the whole essence or nature of which is to think, and that for its existence there is no need of any place, nor does it

depend on any material thing; so that this 'me,' that is to say, the soul by which I am what I am, is entirely distinct from body, and is ever more easy to know than the latter; and even if body were not, the soul would not cease to be what it is.'' [33] Descartes perhaps felt the need of demonstrating this position because he realized the question was not one of essence, but of a particular spiritual existence — this or that soul. If this was the case, we have an example of the transformation of attitude towards the dualism. When the question is how he came by doubting to certainty, there is involved, not the concept of the soul nor a formal principle, but an individual soul of spiritual substance conjoined with a material body. In this situation their being and doubting as individual affairs are necessarily emphasized. The substantiality of particular individual souls and their substantial difference from particular bodies is the point to be considered.

The above may obtain greater verisimilitude if we consider the following point: In the ''Rules,'' as later, Descartes was of course interested in certainty for knowledge. But in the earlier work his analysis is, so to speak, supra-individual. He is telling what scientific knowledge is and what rules should be followed if we wish to think scientifically, that is, with assured basis. Knowledge is a matter of apprehending essences and in one way or another subsuming the configured physical existents under them. Every mind can get scientific knowledge by proper methods of operation: assuming an unclouded understanding knowledge is described as such and such a thing and to be obtained by regulated thinking. But for reasons above mentioned, and doubtless for others, the assurance of the ''Rules'' wanes. Individual soul-substances are shut up within the limit of their individuality. Understandings

[33] *Discourse on Method*, p. 101.

are but infrequently unclouded. As against a more orthodox opinion, the world is not such as the senses reveal it to be. We have the universal error or difficulty that sense qualities are not revelatory of the nature of things. And in addition there are the occasional errors of sense, and the illusions and delusions of feeling and imagination, of dreams and waking states. But God cannot deceive; the source of error cannot be in the nature of things in the given, but in our own acts. Having credited the deity with the "capacity for judgment," and since God cannot deceive us, a difficulty arises . . . " " . . . the consequence would seem to follow that I can thus never be deceived; for if I hold all I possess from God, and if he has not placed in me the capacity for error, it seems as though I could never fall into error." [34] God has not endowed us with a faculty for error, nor is error mere negation. Understanding cannot be responsible for error. Descartes has therefore the single recourse — the will. "Whence then come my errors? They come from the sole fact that since the will is much wider in its range and compass than the understanding, I do not restrain it within the same bounds, but extend it also to things which I do not understand. . . . " [35] Error then is not found in the object of knowledge, the given, but in the violation by the will of the principle that the "knowledge of the understanding should always precede the determination of the will" [36] — a principle, significantly enough, taught us by the "light of nature." The whole Cartesian scheme of thought necessitates such an explanation. The freedom of the will is as much a postulate of his thought as the dualism of mind and body. At bottom they are aspects of one and the same thing. The freedom of the will is required as an

[34] *Meditation*, 4, p. 172.
[35] *Meditation*, 4, p. 175.
[36] *Med.*, 4, p. 176.

explanation of error and falsity; but it is more proper to assert that Descartes found free-will ready at hand, and adapted it to this purpose, rather than that he was forced to it in order to explain error (cf. p. 177). The theological conceptions which circumscribe Descartes' inquiry determine, in this instance as in others, within what limits explanations shall be sought. Again this treatment of error manifests the strain of individualism referred to before, error being a personal matter, a case of voluntary deception.

The study of will is therefore important in the discovery of the source of error and this causes Descartes to veer in the direction of psychological analysis. The apprehension of the simple natures is impeded by a multitude of opportunities for error. And an increasing consciousness of this pressing problem must retroactively cast doubt on the whole matter of the intuition of essence. Descartes' faith in the mind's final ability to seize the logical entities, and faith in the entities as the logical foundations of science may not have been shaken; but the facts of life compel him to regard the problem of knowledge as a great deal more than drawing up rules of procedure. The faith had to be proven true. And finally we may ask why is it not probable that Descartes was forced to envisage the problem in terms of the cloistered individual soul instead of in terms of an understanding whose congenial sphere is the realm of universals? The road from essence to existential particular had been smoothed over because of, first, a still persisting trust in the relevance of ideal form to material object, and secondly, because of the interpretation of things in terms of mathematical configuration which favored their subsumption under essence. The road is obstructed more and more, however, as the uncertain status of sensory qualities and the aloofness of the understanding in the

soul from the matter behind the given qualities are appreciated. When the essence changes its character, as an idea in the soul of mind, its applicability to things is not so easily taken for granted. And so the possibility of the uncertainty of physics and astronomy is admitted, for a time at least.[37]

Whether or not the above account of the motivation of the change of doctrine is complete or adequate, the result of Descartes' development is clear. The most striking result is a radical change in the character of the guarantee of certainty. In the "Rules" we have seen it was logical immediacy, the self-evidence of essence to the understanding, that gave the basis for knowledge. But the "Discourses" and the "Meditations" are marked by a search for *existential* certainty. What is wanted is an indubitable fact, an unshakable item of existence. If Descartes may be regarded as never giving up his belief in the ability of the understanding to grasp self-evident truths, yet it is the case that to overcome other difficulties and assure this power of understanding, this confidence in understanding must be given leverage by grounding it upon some fact immediately apprehended. This fact is the fact of doubting. The doubting itself cannot be doubted. The immediacy of self consciousness is the assured basis.

Now it is clear that as soon as the search for certainty takes this form, the dualistic position and especially the dualism of body and soul, becomes all the more a controlling conception. The incontestable, immediately certain fact must be a matter of the spiritual substance, that is, of mind. But this fact is found in thinking itself; the method of doubt means an appeal to consciousness and to self-consciousness. Therefore we have in this seeking after certainty the conjunction of several ideas. There is the

[37] *Meditation*, p. 147.

spiritual immaterial soul-substance. But in the place of the emphasis on understanding as the knower there is the emphasis on the thinking of a self. Thinking is obviously carried on by the "me"; but it is necessarily also carried on by the soul-substance or within the soul substance. The "*cogito, ergo sum*" must be related to the dualism. In some sense the self must be equated with the soul-substance, as perhaps a name for its series of states, its modes. And so self-consciousness is the consciousness of the soul-substance or an aspect of the life of that substance. The *facts* of self and self-consciousness, of thinking and doubting, must be embraced within the limits of the soul-substance. Now in the "Rules" thinking as an inner characteristic activity or energy of the soul was uppermost. But from the new point of view the emphasis is not on the intrinsic energies of the faculties but on the modes of a substance. That is, thinking and doubting change from general energies to thoughts and doubts in the concrete. The desiderated immediate fact or experience is the fact of doubting. This fact is immediate, it is indubitable. But what is its status?

Now Descartes had affirmed in the "Rules" the pure spirituality of the "power by which we are properly said to know things"; such a tenet, relatively uninfluential in the "Rules" because of its irrelevancy to the purpose in hand, becomes fundamental in the altered situation. The dualism of substance defines a realm in which alone thought could be found. The immediate fact of experience can be discovered only in the soul substance. Descartes does not give us in detail the connection of the soul-substance, the "me", and its experience. But at least this must hold that conscious processes reside in the soul-substance. The search for existential certainty in conscious processes turns his thought toward the spiritual substance as a kind of existence. We have, consequently, not merely mental pow-

ers on the one hand and a world of objects on the other, but two worlds, the one including the general powers of thought and all particular thoughts, and the other the world of physical objects.

It may be questionable whether an appeal to the immediate facts of self-consciousness forces us to find a locus for these facts in a substantial soul. But Descartes has the soul ready to hand. Thinking is what it appears to be, and it is perceived not to be a bodily change, a phenomenon of corporeality. Thinking is wholly unlike material phenomena — it is therefore not dependent on matter. Anything that thinks away matter cannot be dependent on matter, for matter could not think the thought of its own non-existence. But it is evident that the issue is foregone; the dualism which is part of the starting-point naturally reappears in the sequel. Descartes passes from the fact that thinking goes on even when imagining that nothing exists, to the conclusion that the thinking is done by or in a soul-substance. The immediate experience, which justifies the notion that only while thinking can I know that I exist, does not necessitate the conclusion that it is a soul-substance which does the thinking, nor that the soul is "entirely distinct from body."

As the appeal is made to consciousness, so thought must be taken so as to include every conscious process. Thus Descartes declares that "by the word thought I understand all that of which we are conscious as operating within us." And that is why not alone understanding, willing, imagining, but also feeling, are here the same thing as thought.[38]

The changed basis of certainty, with its accompanying modulations of thought, involves sensation and imagination. Now the image for scholastic theory in general was not a mode of consciousness, but an object, the form in a

[38] *Principles of Philosophy*, Pt. 1, prin. 9.

mediate stage of discrimination; so to speak, it was a midway stage in the process of refining the species so as to reveal it in its incorporeality free from matter. In the "Rules" Descartes continues the traditional view. But now sensations and images occupy ambiguous positions, both psychologically and cognitively. They tend to become cognitive processes, and not merely an object of cognition. This appears particularly in connection with the problem offered by the facts of dreams and illusions. We are told that a thing which thinks is a "thing which doubts, understands, affirms, denies, wills, refuses, which also imagines and feels."[39] Imagination is said to be a "mode of thought," but one that is "specially adapted to material objects."[40] Even while in the process of doubt the images of all corporeal things are effaced, "I am nevertheless assured that these modes of thought that I call perceptions and imaginations, inasmuch only as they are modes of thought, certainly reside in me."[41] Imagination then, with some qualification, is a form of thought. At a later point we must return to the consideration of what this qualification means.

So long as his position concerning the understanding's capacity for apprehending the essences was unshaken, the philosopher's interest in sensation and imagination was satisfied by their reduction to configurations and by the theory of their mechanical propagation through the nervous system. But with the shift to self-consciousness and inner observation, imagination and sensation need re-analysis. Interested in showing, as against scholasticism, that the world is not what it appears to be, and convinced that matter as substance is purely geometrical and configured, it becomes more pressing to dispose of sensation, and to

39 *Meditation*, 2, p. 153.
40 *Discourse*, p. 104.
41 *Meditation*, 3, p. 157.

draw a distinction between the material cause affecting the sense-organ, the nervous process (itself within the world of configurations) and the sensation proper. But the secondary qualities, being conscious processes, at least could not be regarded as properties of the external extended substance. They are neither things, nor properties really in and of extended things. Moreover, they cannot be just effects of material things produced by them in the body, for this is still a matter of extension. Hence sensations and, in the same way, images, must be pushed further back, and cannot come to rest except in the spiritual substance. When the emphasis falls on the modes of the thinking attribute of substance, imagination and sensation become modes of thinking, and images and sensations particular concrete mental existences. In the "Rules" the subsumption of images under (mathematical) essences and a difference of interest explains why the gravity of the problem was not appreciated.

From the standpoint of knowledge, accordingly, sensation and imagination tend to assume a cognitive function. Ontologically, they cannot be facts of extended substance, and therefore have their locus in the world of mental existence. In dreams, illusions, and the like, the responsibility for sensation and imagination is definitely placed in the world of thought — in the "me." ". . . I see light, I hear noise, I feel heat. But it will be said that these phenomena are false and that I am dreaming. Let it be so; still it is at least quite certain that it seems to me that I see light, that I hear noise and that I feel heat. That cannot be false; properly speaking, it is what is in me called feeling (*sentire*); and used in this precise sense that it is no other thing than thinking."[42] Another citation might be added: "As to other things such as light,

[42] *Meditation*, 2, p. 153.

colours . . . *they are thought by me* with so much obscurity and confusion that I do not even know if they are true or false, i.e., whether the ideas which I form of these qualities are actually the ideas of real objects or not."[43] In further substantiation the consciousness of the subjective position in Meditation 6 and the felt need of making tenable the belief in the existence of an objective order of things might be cited. As might be expected, Descartes hesitates between various positions, and this is reflected in the uncertainties and ambiguities of his terminology. Sensations are sometimes ideas of sensible qualities; at others, they are the sensible qualities themselves; and at still other times they are apprehensions of objects, a process of thought from which reflection obtains its images.

The reason for this wavering is to be found in the fact that to relegate sensations to spiritual substance does not solve the problem of their status and meaning, but raises many difficulties. If the world is pure extension, what is the significance of sensation? In so far as they gravitate towards the thinking process, their unfitness as knowledge or vehicles of knowledge becomes apparent. Their cognitive rôle has, so to speak, been forced upon them, yet the reasons why they are turned into cognitive agencies in the soul substance are just the reasons that demonstrate their cognitive incapacity. The senses overlay the geometrical forms of things with a network of qualities that screen the real substantial things, leaving to reflective and intuitive thought — the sheer rational process in the narrow sense — the task of cognizing it. But then what is the *raison d'être* of the sense-function?

Descartes has an answer to this question which is the solution that he would like to maintain, and from which he departs grudgingly. This answer is that the primary func-

[43] *Meditation*, 3, p. 164.

tion of sensation is to lead to the avoidance of the painful and the injurious, and the pursuit of the wholesome. Sensations are guides to organic welfare. "... I have a body which is adversely affected when I feel pain, which has need of food and drink when I experience the feelings of hunger and thirst, and so on. ..." [44] "But the nature here described truly teaches me to flee from things which cause the sensation of pain, and seek after the things which communicate to me the sentiment of pleasure and so forth: but I do not see that beyond this it teaches me that from those diverse sense-perceptions we should ever form any conclusion regarding things outside of us, without having mentally examined them beforehand. For it seems to me that it is mind alone, and not mind and body in conjunction, that is requisite to a knowledge of the truth in regard to such things." [45] When this latter statement is estimated in the light of its context, we may note that it implies, first, the true function of sensations as guides to organic welfare, secondly, the disutility of sensation for knowledge of the truth of things, and thirdly, the ascription to reflective thought (mind) alone the power of attaining this truth. "... we have a clear and distinct knowledge of pain, colour and other things of the sort when we consider them simply as sensations or thoughts. But when we desire to judge of such matters as existing outside our mind, we can in no wise conceive what sort of things they are." [46]

Descartes proceeds to distinguish between three classes of objects of knowledge, the three being immediately reduced to two. "I distinguish all the objects of our knowledge either into things or the affections of things (le premier contient toutes les choses qui ont quelque existence; et

44 *Med.*, p, p. 192. Cf. pp. 192-197-237-238-247-250.
45 *Med.*, 6, p. 193.
46 *Principles of Phil.*, prin. 68, p. 248.

l'autre, toutes les verités qui ne sont rien hors de nôtre pensée — French version) or as eternal truths having no existence outside our thought. . . . I do not observe, however, more than two ultimate classes of real things — the one is intellectual things, or those of the intelligence, that is, pertaining to the mind or to thinking substance, the other is material things, or those pertaining to extended substance, i.e., to body. Perception, volition and every mode of knowing and willing, pertain to thinking substance; while to extension pertain magnitude . . . breadth and depth . . . Besides these, there are, however, certain things which we experience in ourselves and which should be attributed neither to mind nor body alone, but to the close and intimate union that exists between the body and mind. . . . Such are the appetites of hunger and thirst, etc. . . . and also the emotions or passions . . . and finally all the sensations. . . ." [47] There are two substances, and therefore, two classes of things. Here again, however, arises the puzzle of the passions and secondary qualities, which are apparently things of both extension and thought, but ought to be and must be, only one or the other. Descartes becomes increasingly interested in the passions, and the traditional procedure was to align the sensations with the passions. The passions are clearly personal, and are psychological subject-matter *par excellence*. Hence we have a reinforcement of the tendency towards the psychological mode of examination of the sensations.

The object of knowledge for the sensation-thoughts or feeling-thoughts is consequently not the pure object — the figured extension — but the relation of the pure object to bodily welfare. In consequence Descartes regards sensation as primarily a practical device functioning in the

47 *Principles*, prin. 48, p. 238.

interests of successful living, and only secondarily as an instrument of knowledge. It is mind or pure intelligence which is the instrument of obtaining real knowledge of the external world, despite the fact that the senses seem, upon superficial examination, to be aimed directly at the physical world.

The final result is that we obtain three orders of things:

First: Logical truths, or ultimate notions logically self-evident when intuited or made explicit by pure reflection. This rationalistic faith of the "Rules" persists but is made to rest upon a basis of immediate fact. Through the method of doubt we reach a fact beyond the reach of doubt. This is to serve as a basis of deductions. It cannot, of course. But Descartes manages to connect up the immediate fact with a new criterion — just how does not interest us in this connection — and with the criterion of clearness and distinctness can proceed to reinstate the logical self-evidents. But we have left the world of forms and in place of the forms have ideas in a spiritual substance. These ultimate notions are accounted for; they are turned into innate ideas. They are the fruit of that spiritual intrinsic energy formerly attributed to understanding. Their innateness consists in the fact that experience, reflection, the avoidance of error and the banishing of prejudice, will lead to their generation and uprising within the mind. They are of the very structure of the mind itself as true thought.

Secondly: The real world of physical substance, or extension. This is the object of scientific knowledge, and the scheme for its comprehension is primarily mathematical concepts, or notions cognate with the mathematical concepts. The world as scientifically known is a mathematical construction.

Thirdly: Peculiar states, due to the union of mind and

body, which exist only because of this connection. They are the passions and sensations. This is the realm of "psychological" investigation. With respect to these facts due to the union of soul and body we observe (a) that while in origin they are accounted for by the union of soul and body, yet (b) as conscious processes they seem to belong wholly to the soul, despite the fact that (c) a physiological explanation can be given of them. From the standpoint of knowledge there is double ambiguity: (a) they are trustworthy in that they furnish information of the relation of things to the welfare of the body, but (b) are untrustworthy when taken as furnishing information concerning the structure of these things; and again, (c) our knowledge of them in their immediateness, as given states, is clear and distinct; finally, (d) sensations, although thought, cannot in themselves give universal knowledge, and (e) when coupled with the pure ideas of reflection they sully that purity.

Thus we encounter correlative modulations in the notion of mind and its knowing. In the "Rules," mind is pure intellection, in a sense that would sharply differentiate thinking activity, doubting, imagining, and the like. It is a spritual activity which recognizes and apprehends truth and only truth. The term "intuition," which plays so large a rôle in the "Rules," used with rather striking infrequency in later works, possesses this connotation. The proposition that the "I" is in essence a thing which thinks doubtless retains as an implication the intuitive power stressed in the earlier work. But there has been an infusion of new meaning. Thinking as the essence of the "me" comes to signify, besides intuition, such "mental" modes as doubting, feeling, and the like. With the change of emphasis from logical self-evidence to psychological immediacy, Descartes must have perceived that the "I" is

just as immediately revealed as existing in doubting or dreaming or sensing as in any other way. These things also are therefore mental, and so mind becomes a collective name for *modes* of thinking. "I am a thing that thinks, that is to say, that doubts, affirms, denies, that knows a few things, that is ignorant of many, that wills, that desires, that also imagines and perceives . . . these modes of thought that I call perceptions and imaginations, inasmuch only as they are modes of thought, certainly reside in me."[48] However, intimately feelings and passions are allied with body, they are nevertheless processes of mind. This whole transformation may perhaps be most adequately summarized as follows: at first mind means sheer rationality, intuitive and deductive reasoning; more and more under the pressure of new considerations the mind comes to signify all those processes which we now-a-days label "consciousness." From the apprehension of logical self-evidents as the fundamentals Descartes passes to immediate facts of consciousness as the chief sphere of investigation wherein to discover the foundations of philosophy.

We pause to summarize the results to this point: (1) We began with the two-substance theory as fundamental. And (2) the spiritual substance (thought, understanding) retained its anciently admitted capacity of directly apprehending truths, leading to Intuition and Deduction as the method of knowing. The truths are simple natures, clear ideas, and in content are essentially mathematical so far as relates to nature. But (3) when the question is of knowledge, not of mathematical entities but of physical nature, we are dealing with the antithetical substance. We must pass from essence to the particular, from thought to existence. Sensations and images reveal physical things; they are themselves figured, and so capable of subsumption under

[48] *Med.*, 2, p. 157.

(mathematical) essences. Yet (4) with the change from logical self-evidence to existential conscious immediacy, however motivated, the cognitive value of sensations and images becomes problematic. On the one hand, they are modes of knowing, and they are removed from the material sphere. They cannot be properties of matter, for they contradict the mathematical conception of nature, and reflection shows that we must contrast sensory qualities with real things. But (5) matter operates on the principle of mechanical causation and so qualities (sensations) are the effects of physical causes. Hence we can argue from sensations to things as from effects to causes. However (6), as related to consciousness, as non-material, they must be modes of thinking as the attributes of spiritual substance, and hence in themselves spiritual. It is hardly too much to assert that the proposition "If cognitive, then spiritual," is reversible: "if spiritual, then cognitive."

III

We are now in a position to appreciate the difficulties that arise from the involution of the dualistic train of thought in Descartes' psychological and epistemological analyses. Epistemological thinking is deflected in a variety of ways. Mind ceases to be what it had been understood to signify — pure thought which knows truth. In its place we have *modes* of a thinking substance, such as doubting, dreaming, sensing, feeling, imagining. These are names for activities: but they tend to be analyzed into static entities. These modes of thinking occupy a peculiar position that is strained and more or less internally discrepant. For as *given*, sense-phenomena are the most indubitable of facts. But knowing goes on in one substance and the things known are in the antithetical substance. Knowing remains an affair of correspondence; for *mutatis mutandis*,

Descartes retains the traditional theory of resemblance and correspondence, of like as known by like; this persists and institutes a problem of the nature, possibility, and method of assuring such a correspondence. The orthodox theory must be fitted to the situation created by the ontological dualism and the emphasis on the immediate facts of consciousness. Now sensations and images must be representative, in terms of the theory. But in their representative character they are the most doubtful of all facts. The representative function parallels the fact of causal connection; they are effects of physical causes. But they are not merely mental processes; their intrinsic character has been determined. They must be spiritual entities, states of thought or consciousness, and therefore utterly different from their causes and consequently from that of which they are supposed to be representative. Yet knowledge of those causes must in some sense involve the use of these dissimilar and uncertified representatives.

It has already been pointed out that uncertainty concerning the mind's ability to apprehend facts of the antithetical sphere of existence was bound to arise when the problem of cognition was formulated in the new terms brought in by the assumption of an immediately experienced fact as the guarantee of certainty. There can be no doubt that Descartes faces the question of how the one substance can know the opposite. That he does not face it less equivocally must be largely ascribed to the orthodox faith that lingered in his mind. But in so far as he faces the problem, the status of sense and imagination becomes of crucial importance. And here he oscillates between two methods of considering sense and imagination. After all, true knowledge still resides in something that is very like the scholastic essence; namely, in clear and distinct ideas. The change to the term "idea" is significant; but

some of its significance is in just this, that it places the ideas of the human mind in kinship with the essences contemplated by the divine mind. And, moreover, the clearest and most distinct ideas are those that would fit in with the notion of essence. It is a commonplace of the commentaries that Descartes, instead of making deductions from his ineluctable immediate fact, switches to an assurance of the validity of clearness and distinctness as a criterion, with added confidence gathered from the doctrine of innate ideas from the proof of the existence of an undeceiving deity, and so forth. After all, accordingly, the things in the world of matter are to be known by clear and distinct ideas, generated through the intrinsic power of thinking itself, or made clear and distinct by control through ideas that from the beginning have these qualifications. But these ideas cannot come through the senses; yet knowledge of particulars, of existential exemplifications of essence, must depend in some measure on the senses. Hence, sense and imagination cannot be dismissed with brief statements of their merely instrumental character. Therefore we have a doctrine of confused ideas — it is noteworthy that the term idea cannot be refused to sense-products, even if qualified — that need to be subjected to other ideas possessing the requisite qualifications in order that the former may be unified and validated.

The situation in which Descartes oscillates is in brief this: one way of obtaining knowledge of material things, let us say, would consist in starting from effects (sensations) in the mind and passing out to their causes. But this is only hypothetical, an argument from effect to cause. There are, however, still other unsatisfying features; for we are not merely passing from effects to causes, but from one substance to its antithesis. If the effects and causes are of the same order — both phenomena of motion — the

difficulty is to get from thought in one substance to both effects and causes in another. Or, if the (sense) effects are mental, the passage from effects to causes involves the surmounting of an obstacle that in other connections at least is called insurmountable. Hobbes felt the first difficulty; but the second could not occur to him, for sense-effects were simply compounded motions in matter. On the other hand, we possess certain clear and distinct ideas, or basic principles, concerning the nature of materiality that are not derived from sense-contact at all. They are generated within the mind itself, independently of sense experience; at most such experience can serve only as a stimulating agency exciting the mind from a dormant to an active condition. These ideas furnish a criterion of validity. But if the problem still remains of revealing how these test-ideas are to be applied to sense-effects, we may add that these ideas furnish more than a criterion. They constitute the first principles of a system of knowledge of corporeal things, they give the essence of matter, and in so far forth may be a meagre knowledge of extension but yet an immeasurably important substratum for knowledge. In a sense the mind knows extension in a way to which sense-contact is irrelevant. Still the problem remains of assimilating the results of sense-contact to the basic principles.

Now in the first case emphasis must fall on the cognitive and representative efficiency of sensation and images; this gives that aspect of Descartes' doctrine in which they are interpreted as spiritual functions, as modes of thinking, and as mental existences. In the second case, however, the tendency is to relegate sensation and the image to the body as (purely bodily) effects of physical causes. Then their entanglement in the problem of knowledge is a sort of unfortunate incidental product of the peculiar composition of

a human being as a creature of body and soul. In the first case, sensations and images are construed as impure and confused thoughts whose revision and purification by fundamental principles fits them for cognitive use. The stipulation implied by the adjective "confused" has no psychological warrant; in this sense all ideas are on the same plane, being all spiritual facts. But cognitively the adjective has its justification in terms of Descartes' presuppositions. In the second case, however, the tendency to hold the physiological account of sense and imagination to be without deficiency goes with a denial of their genuine cognitive function. Considered as bodily events they are modes of corporeal substance; their nature is part and parcel of the nature of extension, and ought to be derivable from the (geometrical) nature of extended substance. In this connection, then, sense-effects are completely on a par with any other fact of physical existence and consequently fall in the domain whose essential outlines are drawn by the fundamental clear and distinct ideas concerning extension. So far from helping in the work of knowledge they are facts the knowledge of which is needed to fill in the details of knowledge of nature.

Sensations and feelings, in short, are not really *known* at all except in so far as they can be deduced as *necessary* effects of and in corporeal substance, or can be submitted to mathematical treatment. And this holds, furthermore, whether they be taken as corporeal events and nothing more, or as mental and spiritual events; for in either case they are occasioned by or caused by corporeal changes. Of course, if sense-processes are spiritual, and are caused by the chain of physical events from extra-organic object to sensorium, there exists the problem of how physical changes can have spiritual effects. But Descartes does not state this position clearly, and could hardly have done so. With

respect, however, to what knowledge of sense-processes implies, he is sufficiently clear. "... lights, colours, smells, tastes, sounds, and the tactile qualities ... *are nothing more, as far as is known to us,* than certain dispositions of objects consisting of magnitude, figure, and motion. ..."[49] There are then three possible treatments of sensation: as purely mental and as cognitive functions; as purely mental, but effects and non-cognitive; or as simply corporeal effects, and cognitively neutral.

A reservation is perhaps desirable here: there is no intention of implying that Descartes so explicitly recognizes these divergent ways of treating sense and imagination. The above analysis represents the positions between which he wavers. Nor is the shifting simple. What might be called the shifting in the psychological treatment is intermingled with the wavering in the cognitive treatment. The cognitive treatment is complicated by the shifts necessitated by the ambiguous position of these psychological processes under the requirements of the dualistic doctrine; hence it is not always easy to decide whether Descartes is writing about spiritual or bodily processes. Finally, it is to be noted that the dualism of substances itself is not constant in his writings. He feels impelled to cast aside the orthodox doctrine of interaction, but also feels constrained to retain it in some sense. And just what this margin implies is not easy to decide. Thus even when Descartes seems to have in mind bodily processes, it is not certain whether he means the bodily occasions of, or causes of, spiritual processes, or whether for the time being at least he identifies completely the sense-process and the neurological.

If we can assign a preference to Descartes, we must say that the second position is that from which he departs most

[49] *Principles of Phil.*, Pt. 4, prin. 199.

unwillingly. Corporeal things known through clear and distinct ideas, with perceptions and images brought under the general body of knowledge of nature — this would be his most congenial position considered in the light of his antecedents and his aims. But after all, doubtless the sort of philosophy he did expound is more important than the one he would have liked to write.

We will now turn to a more detailed consideration of Descartes' treatment of sensation and imagination.

As the older substance had its modes, so now the mind. Thinking is the chief attribute of mind, and particular feelings, ideas, perceptions are its accidents. The nature of these accidents needs investigation. Since this study falls within the limits of the ontological dualism, we know to begin with that mental modes must be spiritual in their existential character. But a great deal more than this is demanded. With the purpose of securing the foundations of knowledge as his aim, Descartes cannot be content merely with the fact that mental modes are spiritual. He must inquire concerning their function and significance in knowledge, and their connection with the objects of knowledge. If by introspection Descartes perceives that the essence of the mind is to think, and that it is a spiritual substance, this has not carried him very far — not as far as he thinks. The relation of the mental mode to the organic process which is its cause (or occasion) and also to the extra-organic object must be explained.

The investigation of mental states as the immediately given can be undertaken introspectively, but this in itself does not lead beyond the mind to the world of objects. Therefore there must intervene a physiological investigation. This obviously brings Descartes to the predicament of relating two antithetical existential orders.

On the one hand, we find, Descartes takes his stand upon

the fact of the dependence of sensation and perception, memory and imagination, upon neurological processes. At times the physiological process is regarded as the cause of the psychological phenomenon: at other times, the two seem to be simply one. When the latter position is prominent, we have a psychology of the Hobbesian kind. On the other hand, it is easy to select statements that would indicate an opposite position, in which the radical difference between the mental and physical (physiological) modes is insisted upon, and the former regarded as either a result of the latter, or the two looked upon as correlated but not related causally.

Certain ideas, however, are apparently never looked upon as aught but spiritual entities, as instances of pure thinking, and for which there is neither neurologically a cause nor a correlate, nor hardly an occasion. These "innate" ideas are indigenous to the mind, and are purely soul-originated. They come to mean to Descartes essential characteristics of the nature of mind and thought. The structure of the soul is such that with its growth in the course of experience and reflection this structure comes to be reflected in the form of "ideas." They are therefore expressions of the essential articulation of mind or thought as such. So far as one can see, Descartes offers no conjectures concerning a physiological basis of these mental endowments; on the contrary, he seems to take pains to indicate the irrelevance of such an inquiry. These ideas, in a sense, precondition all other mental processes; at least the latter get their efficiency and meaning, in the final analysis, from the innate ideas.

In this connection, then, Descartes is least ambiguous. These unique possessions of the soul are, as Windelband has pointed out, more correctly designated as indigenous or native (*eingeboren*) rather than inborn (*angeboren*). They

are off-shoots of the position that immediate rational knowledge is fundamental to a theory of knowledge. Given the proper development, the soul will, by a sort of immanent logical compulsion, come to think these ideas. They must be immaterial, unmediated, universal.

Despite the fact that Descartes on occasion includes sensation and imagination under the rubric of "thought," he also on accasion appears to widen the meaning of innate ideas so as to embrace all thinking. In short, the doctrine of the "Rules," identifying thought with understanding, and excluding sense and imagination from thinking proper, persists in competition with the newer doctrine, according to which sense and imagination are mental modes, falling within the soul, and being a form of thinking. "Any man who rightly observes the limitations of the senses, and what precisely it is that can penetrate through this medium to our faculty of thinking most needs admit that no ideas of things, in the shape in which we envisage them by thought, are presented to us by the senses. So much so that in our ideas there is nothing that was not innate in the mind, or faculty of thinking, except only these circumstances which point to experience — the fact, for instance, that we judge that this or that idea, which we now have present to our thought, is to be referred to a certain extraneous thing, not that these extraneous things transmitted the ideas themselves to our minds through the organs of sense but because they transmitted something which gave the mind occasion to form these ideas, by means of an innate faculty, at this time rather than another. For nothing reaches our mind from external objects through the organs of sense beyond certain corporeal movements . . . but even these movements, and the figures which arise from them, are not conceived by us in the shape they assume in the organs of sense. . . . Hence it follows that the ideas of the move-

ments and figures are themselves innate in us. So much the more must the ideas of pain, colour, sound and the like be innate, that our mind may, on occasion of certain corporeal movements, envisage these ideas, for they have no likeness to the corporeal movements.'' [50] Later Descartes notes of his opponent that he ''admits no *pure intellection* (i.e., intellection which deals with no corporeal images).'' [51] Now when these passages are collated with others of similar tenor, several conclusions are possible. First, there is a faculty of pure intellection, doubtless to be contrasted with percepts and images as confused thoughts. But secondly, there is *nothing* in ideas that is not innate; the senses furnish occasions for thinking, and nothing more. The ideas of the corporeal motions involved in sense-perception are innate. But the ideas of pain, colour, etc., also are innate. Evidently Descartes has three different things in mind: (a) the corporeal motions, the physiological process, which can be really known only through fundamental ideas given innately; (b) the thinking faculty arrives at general notions, concepts, or pure ideas of sense-phenomena — pain, colour — and these are innate in the sense that they can be developed by pure intellection alone; (c) particular sensations, this or that feeling of pain, colour, or sound. The latter distinction seems to be necessary, for Descartes can hardly mean that every experience of pain, as just that much immediate experience, is innate. Thus sense-experience, according to the position implied in these passages, has nothing to do with knowledge directly. The physical causal process is known innately (by pure intellection); and even knowledge of what sensation itself really is has a similar origin. The actual sensation experienced, presumably, if it has any function at all, possesses only that

50 *Notes against a Programme*, p. 442-443.
51 *Ibid.*, p. 446.

of leading immediately to reactions of avoidance or pursuit. This conception of sense-experience fits in with the implications of the body-soul distinction when that is stated as a dualism of *rational* soul and body.[52] And so knowledge of things outside us could never be obtained from sense-perceptions unless we have "mentally examined them beforehand. For it seems to me that it is mind alone, and not mind and body in conjunction, that is requisite to a knowledge of the truth in regard to such things."[53]

It is fair to say that Descartes would like to limit the soul to pure rationality; to keep sensation and imagination outside the soul, admitting them no further than the common sense, including not merely the sensation as corporeal motion, but also as immediate experience; and thus to reduce their function to the status of occasions, in every sense extramental, of the spontaneous activity of mind. But it is equally fair to say that he did not and could not attain this end. He cannot help making a distinction between the sensation as motion and as immediate feeling and admitting the latter to the place of a soul-state. The title of "thought" is given sensation and imagination with a reservation at times: "perceptions and imaginations, *inasmuch only* as they are modes of thought, certainly reside in me."[54] This "inasmuch only" cannot be taken to mean that they are modes of thought only in the sense of extra-mental occasions for thought, for the context shows that Descartes is describing what the ego is after everything corporeal has been laid aside, when "holding converse only with myself and considering my own nature." The very intimacy of our feelings forces the conclusion that "sensations of hunger, thirst, pain, etc., are in truth none

52 *Discourse*, pp. 109-110; p. 118.
53 *Meditation*, 6, p. 193.
54 *Meditation*, 3, p. 157. *Italics mine.*

other than certain confused modes of thought which are produced by the union and apparent intermingling of mind and body.'' [55] The soul must accommodate something more than a pure rational power.

It was common among Descartes' precedessors and contemporaries to look upon sensation and imagination as vibrations conducted along the nerves. And for some of the men who held this theory the feeling itself, the pain, or the colour, was wholly corporeal; Hobbes is the most notable exponent of the position.[56] Descartes' natural impulse would be to give a mechanical theory of their production. The animals have sensation, and they are mere automata. When considering the doctrine of the ''Rules'' we raised the question of the extent to which Descartes identified the sensation as feeling and as a neurological process. The theory concerning animal life would seem to support the interpretation that Descartes meant to make the feeling itself identical with corporeal motion. But after all, even in the case of the animals, it is a question of just how consistent Descartes was in the use of the term ''soul.'' Animals have no *rational* soul, that is clear, and Descartes holds fast to this proposition. But Descartes does not mean to deny sentiency to animals. Yet they apparently are not possessed of a share of spiritual substance. The point is that Descartes' theory concerning animals does not throw light upon the question in hand; rather, we are better able to understand it if we can find a definitive answer to the question of the relation of the corporeal motion to sentiency.

There is no definitive answer. We can only say that the ambiguity is itself a part of Descartes' thought and

55 *Meditation*, 6, p. 192.

56 The writer has shown this in an article on Hobbes in first volume of the *Studies in the History of Ideas*.

he never works clear of it. In the "L'Homme de René DesCartes," if anywhere, we should expect to be clear of ambiguity, so to that work we may turn.

External objects by their mere presence act on the organs of the machine's sense and determine it to move in several diverse fashions, according as the parts of its brain are disposed.[57] God unites the rational soul (*l'âme raisonnable*) to the machine of the body, and the chief seat of the soul is the brain. The soul has *sentiments* according to the diverse fashions in which the entrances to the pores are open.[58] Very significantly, there occurs the expression "*donner l'occasion à l'âme.*" "Ce seront ces petites sécousses, qui passant jusqu'au cerveau par l'entremise de ces nerfs, donneront occasion a l'âme de concevoir l'idée des sons."[59] In the same way are produced the divers ideas of colors and of light.[60] The stimuli are "*parties terrestres.*"[61] Illusions of sense receive a physiological explanation.[62] The pineal gland is the seat of imagination and of common sense. Here are imprinted or traced the figures which the soul considers immediately. The figures imprinted on the sense organs or on the interior superficies of the brain are not those which the soul considers, but those traced on the pineal gland.[63] Descartes even writes of the "traces of ideas passing through the arteries to the heart."[64] Just how the fluid animal spirits manage to receive, hold, and present to the soul these figures, Descartes does not say. The animal spirits are at least an

57 *L'Homme de René Des Cartes*, 2nd. ed., Paris, Ch. Angot, MDCLXXVII, Seconde Partie, par. 16; all references are by paragraph.

58 Par. 28, troisième partie.

59 *Ibid.*, par. 35.

60 *Ibid.*, par. 37.

61 *Ibid.*, par. 29.

62 *Ibid.*, par. 49.

63 Cinquiesme partie, par. 70.

64 *Ibid.*, par. 71.

enlivening preparatory agency without which no reception or retention of the figures is possible.

In the same volume to which we have been referring, in the section entitled "La Déscription du Corps Humain," we learn that soul is a substance distinct from body. It thinks, understands, wills, imagines, recollects, and feels — all these operations are species of thought (par. 3). But thought or the soul exercises only a sort of directive action on movement, for movements depend primarily on the disposition of the organs (par. 4). In the appended "Remarques sur le Traité de l'Homme de Louis de la Forge" we find evidence that La Forge recognized that memory and imagination properly speaking are functions of the soul and that the re-arousal of the vestiges of "ideas" or figures traced on the brain substance is the work of the soul (p. 302).

It seems clear from this account that Descartes' description of the body as a machine, and his neurological theory, do not capture the sensory fact and identify it with the neurological process. Sensations and memories are organic facts, but not wholly corporeal facts. That Descartes never goes so far as to identify the psychological and neurological processes without qualification may be demonstrated by excerpts from the fragments of "Le Monde." The first chapter bears the caption: "De la différence qui est entre nos sentiments et les choses qui les produisent." [65] In this chapter Descartes proposes as the first point to be noticed, that there is a difference between the light and the idea we have of it, that is, between the light and "l'idée qui s'en forme en nostre imagination par l'entremise de nos yeux." He then proceeds to point to the difference between a sound and its sense and queries: "pourquoy la Nature ne pour-

[65] Le Monde, or Traité de la Lumière; published in same volume with l'Homme, *op. cit.*

rat'elle pas aussi avoir étably certain signe qui nous fasses avoir le sentiment de la Lumière, bien que ce signe n'ait rien en soy qui soit semblable à ce sentiment? . . . C'est nostre Esprit tout de mesme, qui nous représente l'idée de la Lumière, toutes les fois que l'action qui la signifie touche nostre oeil." Previous uses of the term "*sentiment*" and the context forestall the interpretation of these passages as meaning that the distinction is between the stimulus and the physiological process. One of Descartes' arguments is that if the senses represent to us correctly the true image of the object, the sense of hearing would furnish us, not with sound, but with the movement of the particles of the air. There is, Descartes implies, nothing outside our thought which is like the ideas that we conceive of heat and cold. Finally, (par. 106) he concludes concerning his hypothetical machine (the human body) that all the functions he has attributed to it (the nutritive functions, recepton of sound, light, etc.) require no assumption of a vegetative or sensitive soul or any other principle of movement or life for the understanding of these functions. "Son sang et les Esprits agitez par la chaleur du feu qui brûle continuellement dans son coeur" suffice to explain the facts.

Citations in further exemplification of the ambiguity might be assembled from other works. Thus Descartes states that the perceptions "which we relate to the things which are without us, to wit the objects of our sense, are caused . . . by these objects, which, exciting certain movements in the organs of external sense, excite them also in the brain by the intermission of the nerves, which cause the soul to perceive them." [66] This statement leans towards the position that the sensation *is* the motion, which is directly perceived by the soul. Again: "It is a first principle *that the whole of the reality of perfection that*

[66] *Passions of the Soul*, art. 23.

exists only objectively in ideas must exist in them formally or in a superior manner in their cause. It is on this alone that we wholly rely, when believing that things situated outside the mind have real existence: for what should have led us to suspect their existence except the fact that the ideas of them were borne in on the mind by means of the senses.'' [67] Here the ambiguity is latent.

But let us turn to another aspect of the matter. If it was difficult for the philosopher to equate ideas with physiological processes, it was equally difficult to relegate to the soul ideas which so patently were dependent on corporeality. This would run counter to the need of tying up these ideas of sense with the modes of corporeal substance which form the basis of any true knowledge of them. Sensations, percepts, memories, images, and the passions are, however, immediate facts of consciousness. Hence their apparent dependence on corporeality is duplicated by an undeniable dependence on spirituality. The theory of the bodily mechanism requires supplementation. ''. . . the diverse *affections of our minds or thoughts* that immediately arise from these motions, are called perceptions of the senses, or, in common language, sensations.'' [68] Descartes speaks of ''confused thoughts excited in the soul by these motions in the nerves.'' [69] ''It may . . . be easily proved that our mind is of such a nature that the motions which are in the body are alone sufficient to cause it to have all sorts of thoughts, which *do not give us any image of any of the motions which give rise to them*; and specially that there may be excited in it those *confused thoughts* called feelings or sensations.'' [70] Again Descartes refers to pain as being confused by the sufferer ''with the obscure

67 *Reply to Objections* 2, p. 35.
68 *Principles of Phil.*, prin. 189, p. 200: italics mine.
69 *Ibid.*, prin. 191, p. 291.
70 *Ibid.*, prin. 197, p. 294, italics mine.

('false' in the French version according to the translators) judgment that they form upon its nature, assuming as they do that something exists in the part affected, similar to the sensation of pain of which they are alone clearly conscious." [71]

Much illumination is reflected upon these points by a study of the Objections and Replies. In the Reply to Objection One, Descartes defines "idea." It is "the thing thought of itself, in so far as it is objectively in the understanding." [72] The idea of an object is an extrinsic attribute of the object from the point of view of the object as existing outside the mind. But the idea also means objects existing in the mind "in the way in which objects are wont to exist there." [73] Descartes is writing of the idea as a spiritual entity, and this is a source of confusion to his opponents, who hold the idea to be corporeal. In consequence they cannot even understand what Descartes' spiritualization of it signifies, or else perversely they refuse to understand it. Thus in Objection Three, Hobbes throughout takes idea as copy, or image, with mind being defined as "nothing but motion in certain parts of an organic body"— which Descartes is continually repudiating. Gassendi shares Hobbes' difficulty. For him the idea is an effluence, akin to the scholastic species. He takes idea as corporeal image, while Descartes' entity of pure thought escapes him. It is worth while to point out parenthetically here that the apparent incapacity of these men to comprehend Descartes is an indication that the latter's position was either confounded with scholastic doctrines, and therefore regarded as inimical to the upholders of science, or else, if the Cartesian doctrine was not so con-

71 *Ibid.*, prin. 46, p. 237.
72 Vol. 2, p. 9.
73 *Ibid.*, p. 10.

founded, it was recognized as novel. One is led to think of the good Bishop's distrust and failure to understand Locke's new-fangled "way of ideas."

This double treatment of ideas is of course exemplified in the investigation of imagination. While in the "Rules," so far as explicit statement goes, the theory of imagination was cast entirely in terms of the geometrical interpretation of corporeality, in later writings it plays the double rôle that we have seen sensation play. On the one hand, imagination is a purely corporeal function; on the other, it withdraws into spirit. Of course, the knowledge-use of imagination is in connection with corporeality. It is "a mode of thought specially adapted to material objects."

It is to be noted that when Descartes has the neurological account of imagination in the forefront, it is sharply distinguished from true thought, and accordingly excluded from the essence of the "me." Imagination, "inasmuch as it differs from the power of understanding, is in no wise a necessary element in my nature, or in the essence of my mind; for although I did not possess it I should doubtless remain the same as I now am, from which it appears that it depends on something which differs from me . . . so that this mode of thinking differs from pure intellection only inasmuch as mind in its intellectual activity in some manner turns on itself, and considers some of the ideas it possesses in itself; while in imagining it turns towards the body. . . ." [74] Further we learn that "imagination is nothing but a certain application of the faculty of knowledge to the body which is immediately present to it. . . ." [75] How does this application take place? Is the knowledge faculty in immediate contact with the corporeal images?

[74] *Meditation*, 6, p. 186.
[75] *Ibid.*, p. 185.

It turns out that Descartes does not maintain consistently the above position. Imagination too must be included within the soul, and we have the traces of a double treatment. Descartes hesitates more in connection with imagination than in the case of sensation. The reason is not far to seek. The term image, and for that matter, the term idea, had always had a connotation of resemblance. They had to possess this in order to have cognitive validity. But the new science had ruled qualities out of nature, and hence the old notion of resemblance is shaken. The pretension of the image to represent objects could no longer take the form of literal resemblance. The perceived object and the image is not a reproduction of the true object which consists of a set of configurations of motion. Yet Descartes cannot escape feeling the force of the tradition, and this is gathered up in the doctrine that imagination is the instrument for knowing the material. Yet this function does not depend on resemblance. "But when we think we perceive a certain colour in objects although we have no real knowledge of what the name colour signifies, and we can find no intelligible resemblance between the colour which we suppose to exist in objects and what we are conscious of in our senses, yet . . . it is easy to allow ourselves to fall into the error of holding that what we call colour in objects is something entirely resembling the colour we perceive, and then supposing that we have a clear perception of what we do not perceive at all."[76] Will is the general source of error, but its erroneous movement is in part due to the mistaken confidence we place in sense-reports as means of knowing. "For in the first years of life the mind was so closely allied to body that it applied itself to nothing but those thoughts alone by which it was aware of the

[76] *Principles of Phil.*, prin. 70, p. 249.

things which affected the body."[77] Light, colours, and sounds are "thought by me with so much confusion that I do not even know if they are true or false, i.e., whether the ideas which I form of these qualities are actually the ideas of real objects or not [the alternative meaning: or whether they only represent chimeras which cannot exist in fact] . . . A certain material falsity may nevertheless be found in ideas, i.e., when these ideas represent what is nothing as though it were something. And inasmuch as (since ideas resemble images) there cannot be any ideas which do not appear to represent some things, if it is correct to say that cold is merely a privation of heat, the idea which represents it to me as something real and positive will not be improperly termed false, and the same holds good of other similar ideas."[78]

Descartes' vacillations are also illustrated by his treatment of the passions. Characteristically he wavers between the psychological and the physiological account. At times he seems about to ascribe certain passions wholly to body, others wholly to soul. He thinks his general position is defined by the statement that passions are peculiarly due to the union of soul with body. In so far as he is interested in maintaining the position that the soul is always a thinking active principle, he is ready to content himself with the passions as purely bodily phenomena. But the soul tends to reveal a certain passivity, and the soul, as passive, is subject to the bodily disturbances of the passions, although in its activity it can repel these threats to its equilibrium. It can even interpolate in the course of the mechanical processes, changing the direction of the current of animal spirits, and thus obliquely controlling them.

It is to be noted that the idea of God suffers from none

[77] *Ibid.*, prin. 71, p. 249.
[78] *Meditation*, 3, p. 164.

of these uncertainties. The idea of God — and the whole doctrine of innate ideas subserves this one notion — cannot be anything but innate, for it cannot be empirically derived or explained. Further, an empirical origin for this idea would not serve Descartes' purposes, for its derivation from the detail of sense-experience would prejudice its serviceability as a means of resolving the methodical doubt; and finally, the empirical source of knowledge is matter sensorial, extended, limited, finite, and particular, and as such wholly incompatible and incommensurable with the character of the idea of God. Therefore God cannot be imagined — he can only be thought. Here, if anywhere, the intrinsic power of pure thought and its complete aloofness from the entire world of corporeality, must be recognized. The idea of God is "something that we are aware of by an apprehension of judgment or inference of the understanding alone."[79] It is clear that the dualism of substance is confirmed and reinforced by the unique character of the idea of God; this is more accurate than to say that the duality determined the position accorded this idea. We have here an instance of the theological influence that guided Descartes' thinking.

Summarizing the results of this study of the use of the terms sensation, perception, idea, and image, we have something about as follows: First, certain ideas, called innate, have unquestioned spirituality, and no physiological explanation of them is vouchsafed. Or, if we look upon "innate ideas" as an abbreviation for the force of pure intellection and its sure fruits, we can say that the pure theoretical capacity for knowledge is never for a moment dislodged from the thinking substance. And innate ideas seem to be direct descendants of the scholastic pure essences and furnish the standard for the evaluation of all other

[79] *Reply to Objections*, 2, p. 37.

ideas. Second: all other ideas, (especially those concerned with phenomena of corporeality) have three discriminable meanings: (a) the idea or image retains something of its scholastic connotation, and is viewed after the analogy of the species, as distinct from the matter, of the object, and is the direct object of apprehension. Moreover, (b) it is also the physiological impress of the object upon the *sensus communis.* Finally, (c) the idea or image is a mental product, generated by the mind's own activity on the occasion of the physiological impress; or perhaps Descartes sometimes tends to think of it as the effect produced within the soul-substance by the neurological process. In this third meaning, with respect to ideas of things acquired in connection with the mechanism of the sense-process, the ideas are confused ideas. They constitute a confused knowledge of that which is known in purity by pure intellection. In Scholasticism we have different grades of knowledge corresponding to different grades of reality. With the discarding of the hierarchical arrangement of existence, the difference in grades of knowledge tends to be eradicated. That the difference is not wholly laid aside is shown by the persistent tendency to contrast pure intellection with other direct or indirect knowledge processes. In so far as Descartes is impelled to place all knowledge, all "mental" processes, within the soul-substance, radically distinguishing the mental process from the underlying physiological process, he must find it difficult to maintain a gradation in knowledge. When sensation and imagination are taken as thought and all thoughts fall within the thinking substance, it is less easy to erect a distinction between higher and lower grades of thinking within the substance whose essence is thinking. If the ideas of sense and imagination are of lesser value, it is because they are confused; and this confusion is but another name for their anomalous

position, since they are in and of spiritual substance and yet come from corporeal things. This confusion must be dispelled by the clarity and distinctness of innate ideas, i.e., by operations of "pure" thought. The scholastic distinction between grades of knowledge is for Descartes primarily one between confused and clear knowledge. The clear and distinct idea is not a psychological matter at all, but is rather a recrudescence of the independent simple essence of the "Rules," largely performing the latter's functions; it is the fundamental element in the Cartesian rationalistic faith. But the ideas of sense and imagination, in so far as they are physical effects, are not confused, for they are like other physical phenomena. They are really effects that must be treated as confused ideas, as essences under conditions unfavorable to their correct apprehension. These intricacies spring from the three-fold treatment of thought; what we may call the ontological, the psychological, and the epistemological methods of treatment.

In the final result we see that everywhere there persists in some form or other the contrast between truths of fact and truths of reason. In the "Rules" it was a contrast between the essence and the configured images to be assimilated to the logically self-evident simple natures. In later writings there is a contrast between clear ideas, which are really truths of reason or pure intellection, and the confused ideas obtained through sense-perception. Knowledge of the extended world is secured in two ways: in the first place, there is the indirect route from the thinking substance to corporeality by way of the physical effects in the body of corporeal phenomena without, or, still more indirectly, by way of the mental processes excited on the occasion of these physiological changes, which in turn are effects of the extra-organic object. But in the second place, we find that the physical world in its essence is latent in

thinking substance all along; mentally indigeneous concepts give rudimentary, but universal and logically primary, knowledge of the world of extension. In this way thought gets directly at the essence of the physical world; sense-experience is valuable only as a sort of stimulus, and as furnishing the particular content of the universal outline. These two approaches are not stated by Descartes with quite this distinctness. The above statements describe the situation within which he labored. The combination of scholastic ideas, the duality of substances, the standpoint, methods, and concepts of the sciences of nature is responsible for these perplexities and confusions.

IV

A few words may be added to show how Descartes prepares the way for later developments by his legacy of unsolved problems. It is a commonplace that Descartes sought to escape from his greatest embarrassment, the relation of the two substances, by attributing the necessary miracles to the pineal gland. As has been pointed out, the interaction of substances was a traditional doctrine. The interesting thing is that it becomes a problem for Descartes. And when he withdrew the supports from his two substances, taking up the problem of relating the two finite substances to the infinite (divine) substance, he in effect gave up the substantial character of finite mind and extension. But along with this goes the change from two substances to two existential series, and the more the substantial character of mind and matter are denied, the more the problem of the relation of two substances tends to take the shape of the relation of two series. The question of how the latent energies of the rational soul could compass a knowledge of nature tends to shift to the question of how the mental states constituting one series could know the

physical changes constituting the other. This change in the shape of the problems Descartes suggests rather than states.

The Replies to Objections show that Descartes' opponents did not fail to see their opening. *"Here you ask, how I think that an unextended subject, can receive into myself the resemblance or idea of a thing which is extended.* I reply that no corporeal resemblance can be received in the mind, but that what occurs there is pure thinking of a thing, whether it be corporeal or equally whether it be one that is incorporeal and lacking any corporeal semblance. But as to imagination, which can only be exercised in reference to corporeal things, my opinion is that it requires the presence of semblance which is truly corporeal, and to which the mind applies itself, without, however, its being received into the mind."[80] Just how the mind can apply itself to the corporeal semblance without receiving it into the mind, is not explained. According to the spirit of the above statement, Descartes is really placing imagination outside the mind, and simply asserting the application of pure thinking power to it. What is interesting at this point is not Descartes' dodging, but what logically we would expect him to do. For the next step would be to posit a spiritual duplicate in the thinking substance for every corporeal process or semblance that cannot be received into the mind. Or else, to drop the notion of thinking substance and content himself with the double series.

Again, a problem arises with respect to qualities. Descartes distinguishes between primary and secondary qualities. The secondary qualities he regards as sensations merely existing in my thought.[81] Further he states that size, figure, movement, situation, duration, and number

[80] *Reply to Obj.*, 5, pp. 231-232.
[81] Cf. *Reply to Obj.*, 6, p. 254.

are "known by us in a quite different way from that in which colour is known in the same body, or pain, odour, taste, or any of the properties which should be attributed to the senses." [82] But it is to be noted that this distinction is not what is ordinarily meant by the distinction between primary and secondary qualities. For his statement seems to imply that some, at least, of what are ordinarily called primary qualities are not sense qualities at all. Size, figure, etc., are mathematical properties, or features of extension; and the essence of matter, extension, is known in independence of sense-experience. "For although in observing a body we are not less assured of its existence from the colour which we perceive in its regard than from the figure which bounds it, we yet know this property in it which causes us to call it figured, with much greater clearness than what causes us to say that it is coloured." [83] Colour, taste, etc., are caused by the mathematical properties; but what is problematic are the precise configurations which correspond in the extra-organic object to the colour, and the precise motions in the body that cause, or occur on the occasion of, the colour sensation. Extension, motion, and the like we know in essence, we know "innately." It is the particular phenomena of extension and the particular chain of phenomena from the source of stimulation through the percipient body that is uncertainly known. Granting that so-called primary qualities are perceived by the senses, they are, however, perceived in combination with and confused by the so-called secondary qualities, which are, properly speaking, the true unalloyed sense-qualities. The point may be expressed by saying that the mind is equipped beforehand with means of grasping the primary qualities in the concrete sensory process; it can abstract

82 *Principles of Phil.*, pt. 1, prin. 69.
83 *Ibid.*

them from the compound of tastes, colours, and sounds in which they appear. In a sense, the mind can read into sense-experience the primary qualities as readily as it can read them out. But secondary qualities have no such advantages; abstracting them from their alliance with primary qualities in sense-experience, they have in themselves no resemblance to extension and motion, and their investigation in terms of extension and mathematics is hampered by this dissimilarity.

The results of this study show how Descartes contributed to the movement leading to the involution of the mind-body problem in the development of epistemology and psychology. Psychology under Cartesian influence tends to absorb the dualism of substances, transmuting and refining it, but not escaping its implications. The problems and results of psychology get stated, implicitly or explicitly, in terms that conserve the ontological antithesis. And epistemology more or less deliberately comes to rest upon a similar basis. In part the ontological dualism works into epistemology by way of psychology when psychological investigation becomes the necessary preliminary to the discussion of knowledge. This is not intended, of course, as a formula to cover the history of modern epistemology and psychology, but it does cover one very important part of that history.

If it is anachronistic to apply to Descartes' doctrines such captions as interactionism or parallelism, it is accurate to say that from Descartes those doctrines are in large part derived. The two substances, even in Descartes' hands, tended to change into two series of events. Descartes helped greatly in the process leading to the isolation of knowledge in a mental sphere, and to the identification of consciousness, the psychical, and experience. He placed a metaphysical doctrine at the beginning of psychological and

epistemological analysis. And if, in later times, psychology eschews metaphysical alliances, the duality of existence has become so incorporated in the use and connotation of words, both in their popular and in their scientific usage, that the ontological dualism lies beneath most psychology and epistemology even where officially and consciously rejected.

THE LURE OF METAPHYSICAL SIMPLICITY

William Forbes Cooley

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Sir Isaac Newton has informed us, somewhat magisterially, that "Nature is pleased with simplicity, and affects not the pomp of superfluous causes."[1] It is matter for wonder what were the great physicist's grounds for this confident *obiter dictum*, and what, for example, was his explanation of vestigial organs. One thing is evident: a predilection on the part of nature for simplicity is not a scientific but a philosophic doctrine — an echo, no doubt, of the Epicurean metaphysics current in Newton's time.

The vogue of Epicureanism for two centuries following the Renaissance is not hard to understand. Speculative thought was rejoicing in its liberation from theological domination, and its temper was not unnaturally akin to the liberation philosophy of the third century, B.C. Scholastic thought in its interpretations of nature was labored at best, and often quite empty. By contrast Epicurus' simple (and easy) solutions of difficult problems had a winning charm. The Aristotelian physics had fallen into many errors through neglect of the principle of scientific analogy; and it became not unnaturally a joyous feat for emancipated thought to show that, not mysterious and intensively rich potencies directed towards ends, but a perfectly simple substance and an essentially simple situation constituted the basis of all things. At first not a little of this movement was truly progressive and wholesome; for, since the new science was working chiefly in the field of

1 *Principia*, Bk. III.

elementary physics, the true explanations *were* simpler than those drawn from organic phenomena and personal experience.

A distinction (commonly neglected) is to be made, however, between simplicity in the *process* of thought, and the simplicity of its *content*, or objects. *Methodologically*, of course, a simple explanation is to be preferred to a complicated one, provided in other respects it *explains* equally well. *Metaphysical* simplicity goes beyond this proper practical preference, and seeks to *make simple explanations possible* by conceiving of the subject matter in such an elementary way that simple explanations will fit it. This is an interest which has affected modern metaphysics strongly and persistently.

To Hobbes, for example, the Epicurean ideal appeared captivatingly upon the horizon — a single cosmic substance, called "body" with motion as its sole function. Discovery, for him, was through continual use of Galileo's "method of resolution." The path to "the inner knowledge of things is purely analytical." The limit of this descending process is a brute bit of exclusive extension, of which nothing is predicable except the simplest external accidents — those of elementary physics. "The world (I mean . . . the whole mass of all things that are) is corporeal, that is to say, body; . . . and that which is not body is not part of the universe." Thus simplicity of substance is imposed upon the cosmos by means of a severely elementary monism. This achievement is paralleled in the field of time with an equal simplicity of causation. "The causes of universal things (of those, at least, that have any cause) are manifest . . . ; they have all but one universal cause, which is motion; . . . and motion cannot be understood to have any other cause besides motion." That Hobbes was not including anything so obscure as force under the term

motion, is evident from his immediate explanation that "motion is the privation of one place, and the acquisition of another." Nor is this causal singleness in any way restricted by any other sphere of existence, for there is no such sphere. Mind is but a general name for "the internal motions of men," and justice, sovereignty, and other social factors are mere terms for the collective resultants of such internal motions. Elementary inert matter in motion is thus, in the last analysis, the complete story of the heavens and the earth, and who will deny the simplicity of the residuum in the philosopher's retort?

Descartes was, of course, no Epicurean, but he, too, and scarcely less than Hobbes, was open to the lure of the simple. Though his successes in natural science were wrought with the youthful hands of experimentalism, he yet, like Jacob of old, felt the need of masking the latter in the approved gloves of rationalism; for experiment does not make for simplicity, but rather for multiplicity and variety. Truth, he felt, is attained only by immediate insight (intellectual intuition), or rather by a series of insights systematically arranged. He exemplified his ideal in his general geometry, an ideal which, if realized in natural science, would mean the mathematical and charmingly simple representation of every phenomenon as the logical and inevitable outcome of the combination of certain variables with, say, two simple constants, or co-ordinates.

It is toward this ideal that his rules of method were directed. This fact is disguised for the ordinary reader by their present-day practical usefulness. Thus, the first rule seems to stand merely for scientific caution, or rigor, in inquiry, and the second lays a very proper stress upon initial analysis. The third outlines the process of trustworthy thought syntheses; and the fourth inculcates the

need of comprehensiveness and care — virtually the positive side of rule one. So not unnaturally J. B. S. Haldane concludes that Descartes' rules "simply make for accuracy and thoroughness of thought." This was by no means the view of the author himself. For him their dignity quite transcended any merely prudential logic, as one may see by turning from the "Discourse" to his earlier and more detailed work, "Rules for the Direction of the Mind." There we find the injunction to "attend only to those objects of which our mind is capable of acquiring knowledge that is certain and indubitable." The philosopher's early craving for the intellectually trustworthy is here in evidence. But how shall we find what is "certain and indubitable?" The answer is, by reducing "involved and obscure propositions step by step to those that are *simpler*, and then, *starting with the intuitive apprehension of all those that are absolutely simple*," etc. [Italics mine.] A subsequent rule, likewise, asks us "to notice which fact is *simple*, and to mark the interval, greater, less, or equal, which separates all the others from this;" and a still later one declares that "if . . . we come to a step in the series of which our understanding is not sufficiently well able to have an intuitive cognition, we must stop short there," and so "spare ourselves superfluous labor" — a principle which his scientific interest did not permit the philosopher himself to live up to. That the things knowable to us by "intuitive cognition" are simple is evident from his warning that, not from the great and difficult, but only from that which is simple and most easy, must we "*deduce* even the most recondite sciences," and from his injunction to give "the whole of our attention to *the most insignificant and easily mastered facts*, and remain a long time in contemplation of them, until we are accustomed to

behold truth clearly and distinctly,'' that is, intuitively. [Italics mine.]

It may be thought that this emphasis upon the simple as fundamental is purely methodological, and due to the author's background of metaphysical agnosticism, but not so. In the ''Discourse'' he expresses his opinion that ''there is nothing so far removed from us as to be beyond our reach, or so hidden that we cannot discover it, provided only that we abstain from accepting the false for the true, and always preserve in our thoughts the order necessary for the deduction of one truth from another.'' A page or two later he argues ''that as a truth on any particular point is one, whoever apprehends the truth, knows all that on that point can be known.''

According to Descartes, then, reality (or existence), if properly approached, is knowable throughout; and knowable *because its basic factors are simple enough to be grasped intuitively* — that is, in single acts of pure cognition — and because even its most complicated forms are logical constructions from these simple materials. These basic factors he called ''simple natures'' and the mind's intuitive recognition of them he called ''innate ideas'' — the Augustinian-Platonic doctrine of the human reason's intellectual response to the divine reason. These intuitions of ''simple natures'' are the original springs of knowledge, from which flows an ever widening river of truth; and the ''rules'' constitute a program for uncovering those original springs. They differ from ordinary scientific analysis and synthesis (Galileo's, for instance) in that the fundamental and all important factor, or logical step, of intuition intervenes between the analysis and the subsequent synthetic process.

Descartes frankly discloses the ground of his faith in

cosmic simplicity and consequent complete knowability: it is his happy experience in the field of mathematics. There he had had notable success in reducing seemingly baffling forms of space and time to simple terms. Since all truth is alike, why should not his geometrical method yield equally sound results in other fields — in physics, for example? Sense reveals to us a bewildering mass of qualitative disparities. No clearness of insight is possible, because there is no simplicity; but when reason resolutely pushes its way through the sensory confusion to the properties which are *necessary* to the idea of material things, it finds them very few and purely mathematical, and the resulting situation consequently simple and susceptible of immediate cognition. That situation consists of a single homogeneous substance with but one fundamental, and a few derived, properties, the substance being broken into bits which are in ceaseless motion. The mind, as it confronts that elementary cosmic situation, finds itself face to face with absolute reality; for it cannot eliminate these residuary properties and have anything left. (Descartes seems to have escaped idealism only by failing to consider whether there was any logical necessity of having anything left.)

In the seventeenth century, then, for both Epicurean and conceptualist simplicity was a metaphysical as well as a methodological ideal; and such for full many able thinkers — Newton and Kelvin, for example — it has remained since. A common illustration may be found in the ordinary inversion of the principle of parsimony — an empirical rule which more often than not is construed rationalistically. Newton justifies it on the ground "that Nature does nothing in vain, and more is in vain, when less will serve." But as originally stated by Occam it was a clear expression of the positivistic attitude of science. No ideas should be added to any set of empirical facts beyond those

necessary to explain them. Today the usual construction of the principle is — at least among philosophers — that inquiry should adopt the *simplest* hypothesis, as though simplicity were the supreme desideratum in an explanation. Assuredly, on the contrary, the prime virtue in an explanation is that it should *explain*, that is, agree with all the facts involved and co-ordinate them in such a way as best to facilitate mental grasp and subsequent control. To demand that an explanation if it is to be accepted as true shall be simple is rationalistic, not positivistic. It is to weight inquiry with a metaphysical assumption which amounts to a prejudgment of the facts, and to render explanation logically impossible in all those cases where the subject matter itself is not simple. The fact that the more elementary laws are simple is no warrant for concluding that with the progress of science the newer laws will be simple, too. As Bertrand Russell remarks, "It is just this characteristic of simplicity in the law of nature hitherto discovered which it would be fallacious to generalize, for it is obvious that simplicity has been a part cause of their discovery." [2]

What, now, are the credentials of the ideal of metaphysical simplicity? Upon investigation they appear to be *entirely subjective*. We look in vain for any adequate warrant for it in well attested parts of our experience. This statement will doubtless be disputed. Some will declare that scientific progress is largely an increasing disclosure of the essential simplicity of nature; and probably the solar system will be instanced. How much simpler are the real motions of the planets than those attributed to them by the Ptolemaic accounts! Quite true; the fact that the human observer is not at the solar focus of the planetary orbits, but in the midst of them, and on one of

[2] *Mysticism and Logic*, p. 102.

the moving bodies, and that a teleological natural philosophy biassed the Ptolemaic astronomer in favor of a central position for the earth — these factors so confused the situation that the true explanation, when made, was naturally much simpler than its immediate predecessors, though much less simple, be it added, than those of primitive man, as in the Osiris myth, for example.

But was this gain in simplicity through the Copernicus-Kepler-Newton theory metaphysical or methodological? It may be doubted if the Ptolemaic system, with its full equipment of cycles and epicycles, was ever accepted as a *metaphysical reality* by any thinker of importance. For ancient astronomy it was not so much a statement of facts as a way of dealing with facts. Of course, the simpler way of Copernicus and his successors is to be preferred. But as regards the planetary movements conceived *as actual* by ancient thought, is the modern scheme simpler than, say, the Pythagorean? No one will claim, of course, that ellipses are simpler than circles; and wherein is gravitational control simpler than that of the crystal spheres? In the latter, apart from matter itself, the main factors appear to be momentum and rigidity, while since Newton they have been momentum and gravitation. Is gravitation, then, with its action at a distance, a simpler conception than rigidity, or contact pressure? Surely no physicist will allow that. After more than two hundred years of inquiry gravitation still confronts him with its veil undrawn. Thus the simplification effected by modern astronomy is real enough — indeed, truly notable — so far as it is a matter of method of inquiry, formulation, and calculation; but it is by no means evident metaphysically.

The question may well be carried further: the factor common to the Pythagorean and the Newtonian conceptions — momentum, or inertia — is it simple? Abundantly fam-

iliar it is, of course; but so is life, and many another thing which is either complex or intensively rich. What is the meaning of matter's persistent drive forward in the direction in which it happens to be acting, a drive which it abates only in the presence of superior force? Let him who can, regard this as a simple matter. Elasticity appears to be one form of it, and that has proved a puzzle for many moderns, from Hume and Lotze down. To hasty thought it is likely to seem simple, because when a little known subject-matter is once fitted with a distinctive name, it is, by a kind of auto-hypnosis, easily classified among the things that have been disposed of, and are now understood. To the speculative physicist, however, inertia is a highly potential concept. In it the doors of the power-house of the universe appear to be ajar, and through it may yet be revealed the long sought *αρχή*.

And this suggests metaphysics's age-long quest for a simple substantial substratum to nature. The Milesians appear to have been groping toward it, though potency was too evident for them to ignore. Parmenides created it by an impressive feat of rationalism. Increasing acquaintance with nature, however, sapped the edifice of his thought, and plurality and diversity won out. Not one element but four, or six, had to be recognized, and then the metaphysical heretic, Anaxagoras, broke from the ranks, and asserted eternal diversity and complexity, though even he sought to make his *Nous* as simple as possible. In the Democritan system metaphysics ran true to form again, and with a constructive power which has been repeatedly hailed as victorious. Admirers of ancient atomism, however, too often failed to distinguish between its two leading associated, but essentially different, factors — mechanism and elemental simplicity. The former has been adopted and justified by advancing science; the latter has remained what it was

then, a retreating goal, an elusive and disappointing ideal.

In the Middle Ages simplicity was present chiefly as a tendency of thought. There was little place for it as an ideal under the reign of philosophy which traced all things to purposive will; though in a way the naive authoritarian doctrine of creation was a case of the lure of simplicity. It was a cutting of the Gordian knot of world genesis. With the reaction of the Renaissance, as has been said already, the Epicurean conception of elemental homogeneity and simplicity arose again upon the horizon, and with almost the glory of a revelation. Like many another revelation, however, factual verification proved very difficult to secure, and its ideal slow, disappointingly slow, in attainment. So long as elementary physics was the dominant science, simplicity's star shone clear with hope; but with the growth of chemistry — which, it would seem, should have carried it to the zenith, if true — clouds persistently dimmed its radiance. For not one element, not four elements, not six elements, were discovered and recognized by the new science, but more, and continually more, up to four score! Moreover, all these elements behaved in unexpected and even astonishing ways, and with a flagrant disregard of the requirements of simple substantial extension. A mass of hydrogen atoms, which by themselves may seem to fulfil the Democritan requirements of blind impulsiveness, and persistently disown each other, at once drop their divisiveness when mingled with half their number of oxygen atoms, and choose partners in a riot of enthusiasm; and recently the radium atom has shown itself more surprisingly dynamic than a battleship. That is, the elementary world, which looked so simple to the constructive imagination of Democritus, with its paucity of facts, became more and more varied and complex *with the increase of actual knowledge.*

Yet simplicity's star had not set. If the Daltonian atom,

with its imperious choices and rejections and its amazing transformations, must be substituted for the ideal homogeneity of the Democritan atom, at least it was possible to hope and believe that deeper inquiry would show an underlying homogeneity in some common denominator. The champion of the new simplification was Kelvin. Might not the exceedingly various elementary atoms be but quantitatively different forms, or modes, of one truly simple substance, say, ether? Sure enough; why not? In the wide sweep of our metaphysical ignorance there appeared to be nothing in the way of such a conception, except the absence of any conceivable integrating, or individuating process; and this Kelvin sought to supply by his ingenious hypothesis of ether whorls. Mechanically and mathematically these appeared to be quite possible realities, and the posit of them, it seemed, might well bring the quest for cosmic simplicity to a successful conclusion. The "final simplification" seemed to be in sight. It was not, however; nature again displayed a heartless indifference to the theoretical cravings of man's mind. When cornered by inquiry and forced to testify, she was found to care no more for Kelvin's atomic vortices than for Descartes' cosmic vortices. The atoms, she confessed, were indeed composite and not ultimate individuals, either Democritan or Newtonian; but she treated quite cavalierly the strong suggestion that she concede their internal simplicity. Not so; the atoms are as far from simplicity as a watch from the homogeneity of a mere lump of brass. According to Professor E. F. Nichols, the complexity of the iron atom far outranks that of a grand piano. The disclosures and probabilities of recent molecular physics — some of them as surprising as Arabian Nights adventures — are nature's answer to the demand that she throw up her hands and confess that her arcanas are empty shrines. Evidently the atoms of

the old materialism are not the atoms of Dalton and Crookes and Le Bon.

But faith is not wont to yield to the unfriendliness of facts; and metaphysical faith is no exception. If the structure of the atom is ground hopelessly lost, why may not the fundamental simple unit be the electron? Or, if its character as a negative charge over against other units positively charged savors too much of potency, why may we not reduce the electron to still lower terms, and conceive of it as a mere point of strain in the ether? Then we shall have metaphysical simplicity at last, for surely the ether is simple. Why not, indeed? When dealing with an entity concerning which, as in the case of the ether, we have no empirical *facts*, there should certainly be room for the insertion of any self-consistent objects that may be desired — astral bodies, and all the machinery of the occult, for example. But are we to learn nothing from past failures in theoretical construction? Are probabilities as to future discovery still to be estimated by means of an assumption which has never held good in any verifiable case hitherto?[3]

Two conclusions arise as we look back over this hasty survey of speculative physics:

(1) Cosmic simplicity is an objective that seems near or remote according as man's ignorance of nature is all but complete or has yielded in material respects to verifiable discovery. Repeatedly, when science has reached the alleged seat of metaphysical simplicity, it has found either complexity or potency there enthroned. Why did that part of reality seem simple from afar? Evidently because so

[3] A recent scientific writer has stated the situation clearly: "Some of the older physicists used to consider it as axiomatic that 'Nature is always simple.' Unfortunately the evidence is all the other way, that Nature is very complicated. In fact, Fresnell seems much nearer the mark in saying, 'La Nature ne se soucie pas des difficultés analytiques'." (A. D. Ritchie: "Scientific Method," p. 114.)

little was known about it that the mind had no materials for conceiving it otherwise. How simple to our imaginations is the far side of the moon; but does any astronomer believe that it would prove to be so, if it could be actually inspected? The situation is much more acute — our ignorance far more enveloping — as regards the ether; but, so far as if we are to believe in its existence at all — which some men of science do not — it could seem from the teachings of experience that we should regard it as presumptively intensively rich rather than qualitatively bald and impotent.

(2) It is significant, also, that the really strong thinkers who have striven to reduce the natural world to a rigorous simplicity of substance have been dualists. Descartes eliminates from matter every brute, or non-mathematical, property; but it is by turning all the rest of the experiential content over to mind, in which field he finds the simplifying process soon balked. Newton and Kelvin make no attempt in the latter direction, but are frank theists. Even Spencer, though taking great pains to lead us back to a homogeneous cosmic condition which bears the aspect of original simplicity, finds the need of something further — a cosmic all-potential Source. These men are evidently robbing Peter to pay Paul. They have no idea that the cosmos *in toto* is fundamentally simple, they seek to render their own field of inquiry — the physical world — more amenable to broad generalizations by transferring all persistently refractory factors to the realm of mind.

If underlying simplicity is not discoverable in physics, it would seem hopeless to look for it where vital functions are involved; yet attempts to find it in that direction recur with each new generation. Descartes again furnishes an instructive example — his account of the circulation of the blood in the fifth part of the "Discourse." One reads it

with conflicting feelings — respect for the author as a pioneer physiologist, (ferreting out organic mechanisms, etc.), and a wondering perplexity over the course of his constructive imagination in building out beyond the facts. This course is steadily in the direction of simplicity, even to the point of neglecting the suggestions of the facts.

The heart for him is an internal combustion engine, the activity of which involves no mystery when once we have endowed it with non-luminous fire, a fire which curiously enough appears to have no waste products. The heat thus generated anyone may perceive for himself, and *it is quite sufficient to vaporize the inflowing blood*, which is thus (through its expansiveness) caused to impel itself along the arteries throughout the body and back again by way of the capillaries and veins to the heart. A strange feature is that while the arterial vaporized blood is liquified at once in the aorta, the less fluid venous blood, after being "distilled by passing through the heart" requires cooling by the fresh air in the lungs "to convert it anew into blood" — another feature suggesting the modern gas engine. Digestion consists in two processes, the "dissolution of the food" and the distillation of it "by passing and repassing through the heart perhaps more than one or two hundred times a day;" and its distribution is effected by the circling blood stream — an organic vortex — which, like a river with its detritus, sweeps the food to every part of the body, where "according to the situation, shape, or smallness of the pores with which they meet, some rather than others flow into certain parts, in the same way that some sieves are observed to act," etc. The generation of the "animal spirits," or nervous fluid, is equally mechanical and simple. Certain arteries "proceed from the heart in the most direct lines" to the brain; and into them the "parts of the blood which, as most agitated and penetrating,

are the fittest to compose these [animal] spirits'' crowd, to the exclusion of ''the weaker and less agitated parts.'' The aim of this account is evidently to reduce the organic processes of circulation and assimilation to the simple mechanism of a coal-breaker, and the genesis of nervous tissue to the simplicity of boiling water.

When we compare this scheme of Descartes with that of present-day physiology, we, of course, should not take advantage of three centuries of discovery to look down upon him for what he did not know. That would be sophomoric. From the view-point of *science* Descartes' experimental progressiveness and original insight (so far in advance of his time) are the impressive things. But from the view-point of *philosophy* we may, and should, learn from his mistakes; for, however pardonable they may have been in him, they become unpardonable if repeated through the course of centuries.

Descartes was not mistaken in dwelling upon the mechanical structure of the organism. The circulatory system, as a whole, is a machine — indeed, an engine, developing its own power. But it is much more complicated than he thought, nature having again declined to have simplicity foisted upon her. The function of the lungs is not cooling but heating, and *very much more* — introducing oxygen to the system, discharging gaseous waste products, etc. The mechanism includes an elaborate nervous organization for purposes of control, without which it would be as helpless as a gasoline motor destitute of sparking connections. Digestion is not merely a dissolving, still less a distillation, of the food; it is even more a *constructive* process — a shaping of organic materials for their places and functions in the body. Their distribution is not a simple sorting out by geometrical devices of larger from smaller units. It is ''assimilation'' — an appropriating, or selecting, by the

tissues of such materials as they need when the blood stream brings these within their reach. The distinctively organic function of stimulus and response is continually present. Nor is the blood a mere hot rivulet with only the duties of conveying heat and restorative material to the body's weakened parts. It is, also, and perhaps supremely, the specialized conveyer of oxygen to the tissues, whose very life depends upon their chemical reactions; and at the same time it is the ever-flowing drainage canal for the organism's waste products. Then, too, it transports the secretions needed by certain parts from other parts which have been specialized for their production, and, finally, it is the great means of protecting the tissues from invading organisms. This last great service it renders in two, or more, ways: (1) In some cases by the transmission of chemical antidotes to the toxic products of the invaders, antidotes developed within the organism itself; or it may be of similarly produced poisons for the actual destruction of the invaders. (2) In other cases it attacks them directly, through the agency of its constituent wandering cells, and devours and digests them.

The situation only becomes the more intricate when we turn to the *constitution* of the blood. It is not a simple inorganic fluid — far from it. It is a tissue, with a fluid intercellular substance, or plasma. As a tissue it is made up of three kinds of cells: — (a) Red cells, or minute biconcave discs averaging about 1-3200th of an inch in diameter. These are generated in the marrow of the bones, and human blood contains about five millions of them to the cubic millimetre. They are themselves highly compound chemically, and one of their chief proteins, haemogloblin, (itself highly organized) is the oxygen carrier of the blood. (b) Only one fifth as numerous, but quite as remarkable, are the white, or wandering, cells. These are

variable in shape, because of a certain amoeboid power of locomotion. They are of two main kinds, the lymphocytes and the leucocytes, the latter being again divisible into five varieties. It is these leucocytes — then called phagocytes — that run down intruding micro-organisms and devour them, thus serving both as police and as scavengers. (c) Of the function of the third kind of cells, the platelets, little is known.

Finally, the circulatory system is alive in virtually all its parts. It is not a clever combination of unorganized materials — tubes, pouches, and fibres — which *collectively* produce life. On the contrary, it is made up of living units — tiny organic individuals — called cells, each with its own birth and growth, its own functions and needs, and its own decay and death.

This brief sketch is, of course, but the beginning of physiology's account of the circulatory mechanism in animals, an account which becomes increasingly complicated as one follows it, until only the technical reader can understand. It is evident that nature has not responded favorably to Descartes' expectation that on close acquaintance her organic structures would be found to be simple. It appears to be hardly less evident that it was his extensive ignorance of his subject-matter that made it possible for Descartes to believe in its essential simplicity. If he had known the facts of modern physiology, it would seem that his faith must have broken down. This point might well be illustrated, also, by the comparison of the complex views of present-day biologists as to the origin of species with those of the biological authorities of a generation ago, when with much less information they were captivated wholesale by the simplicity of pure natural selection.

If objective warrant for belief in metaphysical simplicity is thus lacking, it need hardly be added that its source is

in the subjective realm — in some inveterate interest of the human mind, an interest perhaps so steadfast that the individual thinker does not recognize it as a product of his own nature. Such an interest is evidently at hand in that natural intellectual craving for a character, or fundamental aspect, of the world which shall be *easy to grasp*. Multiplicity and diversity are bewildering. Experience has taught us the value of unitary conceptions; and what is unity but simplicity? Ah, but is it? The ordinary by-path into obscure speculation, well worn by philosophic feet from the time of Plotinus down, turns off with just that uncritical assumption that unity and simplicity are synonymous, the ambiguous little word "one" being the usual misleading finger post. Unity signifies properly either the first integer in the number series, or else something which, while composite, is yet single through its structural organization around some central point or purpose. An engine is thus a unity, as is also a nation, and every living individual. But when "oneness" is used in the sense of mere homogeneity, or qualitative sameness, it becomes ambiguous; for its proper numerical reference all but disappears. It is possible, of course, to think of one substance as the constituent material of all things, and thereby to contemplate a kind of qualitative singleness; but, whatever the services of such an elementary common denominator, its connection with unity proper is remote, and the fortunes of unitary conceptions by no means hinge upon its truth. If the unification of the cosmos is a peremptory need of any mind, it is not driven to metaphysical simplicity to secure it.

Another source of the simplicity ideal appears to be the Epicurean desire to rid the world of spooks — the supersensible as distinguished from the subsensible. And how can this be done more effectively than by turning upon the cosmos the lime-light of exhaustive analysis, and showing

that in a world as simple as ours there is no room for such things, and that Hamlet was much in error in his remark about the number of things in heaven and earth. This interest is, of course, plainly in the realm of personal value judgments.

Apart from such rather naive desiderata, why should thought posit simplicity as the basic cosmic situation? It is, of course, not the only correlate to empirical concreteness. No doubt a certain polarity in the world process seems forced upon sober metaphysical thought; and the antithesis of complexity and simplicity is a possible form of it, a form which commended itself to Anaximenes of old and led him to sketch the ceaseless world movement in terms of the thick and the thin. Heraclitus improved upon this naive attempt, though at the cost of greater complexity, as did also Empedocles. With the latter thinkers a certain value polarity begins to appear — the edge of the wedge between purely descriptive and appreciative explanations. This difference is strongly in evidence in the Aristotelian metaphysical scheme as opposed to the Democritan; for there over against the poles of simplicity and complexity, we have a new polarity offered — potency and actuality, or incipiency and completed development. Taken relatively, that is, as working principles and not as absolute existences, both polar pairs appear to be applicable to our world; nor is there then any necessary conflict between them. Indeed, potency and actuality may reasonably be regarded as the deeper metaphysical account of the more obvious phases known as simplicity and complexity. Yet there is a difference in their temper. Aristotle's poles are confessedly relative, and do not require the existence anywhere of pure potency or pure actuality, his theistic doctrine not being integral to this conception. The Democritan polarity, on the contrary, has generally shown the ear-marks of an

absolute ideal. It is never really content until it has the field to itself. The animus of disparagement of all that is intensively rich is in it, and a certain zeal to *explain away* all that taxes the easy flow of thought. That the human mind should attain to an ejective attitude to the world is so great a desideratum that human dignity and human destiny are freely sacrificed upon its altar.

If the lower metaphysical pole is not necessarily simplicity, neither is it necessarily a hidden complexity. Indeed, to regard it as such is a subtle way of conceding the simplicity assumption itself; for it implies that at bottom existence has but one form of activity, namely, change of position. The lower pole most adequate for thought is potency, and potency conceived as underlying even the most elementary mechanism. *Speculatively*, we have at least an equal right to conceive of existence as intensively rich — that is, capable, even when without mechanical structure, of various forms of function — while *empirically* perhaps the most surprising thing about the new physics is its great enlargement of the field of potency, the iron atom, for example, being now endowed with a hundred or more *possible* forms of activity. If the radical mechanist insists that these *must* be due to mechanical complexities, it is because his faith is functioning rather than his facts — a faith which maintained rigorously involves an infinite intensive regress. No doubt potency is a vague idea, owing to the limitations of our knowledge; but at least it is in harmony with the facts, and not a doctrinaire report of them.

If simplicity is a subjective, not an objective, requirement, we should expect to find it asserting itself in other fields than the metaphysical; and such is actually the case. In various directions the subconscious demand that the world shall be simple is plainly in evidence. It shows itself

in theology in the preference for creation views over evolutionary. So far as this is not fully accounted for by tradition and convention, it appears to be essentially a desire for metaphysical ease. Its practical effect is reactionary; for the scientific inquirer who persists in seeking the process of cosmic origination comes to be regarded as a troublesome meddler with things that are beyond him, and a disturber of human peace of mind.

The will for simplicity is in evidence again in the common impatience with ethical distinctions. The ordinary man regards the moral world as a domain governed by plain, simple rules, in which only a bad heart can lead any one to diverge from the conventional requirements.

More serious than these cases is that of the doctrinaire — that species of insistent simplifiers with which the world is now so seriously plagued. For these men the world of human affairs is really simple when once, like Copernicus, one gets the right, that is the doctrinaire's, point of view. The trouble with humanity is its brutish or willful blindness to the wise censor's beautifully simple insight and infallibly curative nostrum. For such gifted seers all meliorism, all complicated programs, are self condemned, because they lack that all-important factor of simplicity which is truth's intuitive gleam, its indispensable earmark. It is a corollary of this principle that the doctrinaire is under no obligation to assist in any program for the common good which does not follow his vision and adopt his panacea, while, if such a program is carried into effect despite his criticisms, he is at full liberty to oppose it to the limit, and abuse its authors and agents. Out of such willful faith arise childish controversies while the car of progress lies bogged to the hub, and at times opinionated oppositions that threaten to block it altogether.

It may be asked what, in default of metaphysical sim-

plicity, is to be regarded as the actual underlying character of the world? The only justifiable answer appears to be: Whatever ultimate critical inquiry — if such there ever be — actually discovers it to be, not what autocratic thought demands that it shall be. Does this negative conclusion indicate that our discussion has been futile? No, for an intellectual attitude may be of more importance than a metaphysical conclusion; and a positive attitude toward the world appears to be justified by this examination of metaphysical simplicity. If nature's habit of meeting our persistent interrogations with disclosures which astonish our conservative minds and flout our rationalistic demands is disconcerting at times — inducing in us a certain agnosticism (Huxleyan, not Spencerian) — at least it promotes an attitude of expectation, and warrants us in keeping open

"The soul's east window of divine surprise."

RELIGIO MATHEMATICI: THE GEOMETRICAL WORLD OF MALEBRANCHE

JOHN HERMAN RANDALL, JR.

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In the lore of the historian of philosophy there is a tradition that Berkeley on his trip to France in 1715 forced himself upon the aged and already failing Malebranche, and engaged him in discussion over the points of difference between their respective notions. The argument waxed more and more heated; Malebranche suffered a stroke, and died shortly thereafter, the victim of British empiricism. The legend concludes with a query as to what points the two idealists could have found so conflicting.

Whether this tale be true or not, it is eminently fitting that such an event should have occurred. For no two men could well have been found more diametrically opposed to each other on the most important philosophical question of the day than Malebranche and Berkeley. True, there is a sense in which the term "idealism" can be applied to the system of each; true, both were to a large extent inspired by the religious motive, and emerged from their philosophizing each with a new conviction of the existence and glory of the Christian Deity. But on the issue of greatest moment in the intellectual world of the late seventeenth and early eighteenth centuries, their views were as far apart as day is from night. Hence nothing could have possessed greater propriety than for the English bishop to murder the French Oratorian.

The question that divided them was the fundamental one of the validity of the new mathematical interpretation of

nature. First successfully initiated by Galileo, formulated into a conscious method and provided with a prophetic world view of majestic sweep by Descartes, the faith that the world was at bottom a great machine, and that the secret cipher of Nature was to be solved and read by the application of the key of mathematics, had swept over seventeenth century Europe like wildfire, and had captured even the empirically minded Britishers. Greatest of all its exponents was Isaac Newton, the very personification of the new science.

It was against this mathematical conception of Nature, which made of the world a dark, cold, silent mass of matter impelled through space, that in the name of the actual experience of the senses Berkeley rebelled, and determined to "side in all things with the mob."[1] He looked upon the natural beauties of the earth, its verdure, its prospects, upon the bright luminaries in the heavens, and the vivid and radiant lustre of the fixed stars, and asked, "Is not the whole system immense, beautiful, glorious beyond expression and beyond thought? What treatment, then, do those philosophers deserve who would deprive these noble and delightful scenes of all *reality*? How should those principles be entertained that lead us to think all the visible beauty of the creation a false imaginary glare?"[2] Berkeley throughout trusted implicitly in the evidence that his senses bore to him of the nature of the world in which he found himself; for him the particular sense-impression was the real thing, and the general idea was a notion to be discredited before the bar of the senses. As Professor Woodbridge has so conclusively shown,[3] Berkeley's main interest was in opposing the Cartesian and Newtonian

1 *Works*, Fraser ed. 1901, I, 7.
2 *Works*, I, 424.
3 *Studies in the History of Ideas*, Vol. I, art. "Berkeley's Realism."

mathematical world with the rich, colorful, variegated world of the common man's experience.

Malebranche, on the other hand, had committed himself body and soul to the geometrical world of the new science. From the day when he first picked up Descartes' *Traité de l'Homme* and poured entranced over the force and the logic of the reasoning, he was fascinated by the new universe that unfolded itself before him. Though he too was overpowered by the beauty of the world, what claimed his fervent devotion was not the seductive and temporal beauty of the senses, but the eternal and immutable beauty of the mathematical relations of things, that intellectual order that far outshone in glory all that the world of the ordinary experience about him could offer. If Bruno was the prophet and the poet of that earlier nature philosophy which burst the narrow confines of the world of Dante and Thomas, and launched the spirit of man upon the unfathomable spaces of infinity, Malebranche was the poet of the seventeenth century geometrical science which opened to the mind realms and dominions that made the material universe of Copernicus seem puny in comparison. For him the new science became truly a religion; a religion blending subtly with the older traditions of Christianity, and capable of formulation in the Christian terms and symbols, yet a religion as different from the Christianity of the Middle Ages as that itself was from the Christianity of the apostolic era. Intoxicated by the new glories opened up through reason, Malebranche came to have a profound distrust of the senses. He was of those who, from the days of the Eleatics to those of Copernicus and the modern scientist, have felt that when the evidence of the senses conflicts with that of the reason, no man will think twice before cleaving to reason.

Malebranche was not a practical scientist; he had little

inclination to extend the control of man over nature. For him it was enough to know and worship intellectual beauty. The Cartesian system became to him not the instrument for rendering men "the masters and possessors of nature" that it was to its founder,[4] but a world view whose primary appeal was aesthetic and emotional. Whereas to Descartes investigation had been the characteristic note, to Malebranche it was rather worship. Upon him had burst the vision of the realm of pure thought, where truth does not change or pass away, but remains forever the same, an infinite, unvarying, necessary order of relations. In the face of this marvelous realm, who is man that he should presume to think of turning its secrets to his own advantage? Rather let him fall upon his knees and thank God that he has been vouchsafed the supreme good of life, in comparison with which all lesser goods are of no moment, and that it has been given to him, a mortal, to enter the field of immortality.

In the search of man for that in life which will be permanently satisfying, and through the achievement of which his soul can find deliverance, surely few visions have been so noble as that which fell to the lot of the Oratorian poet. For those who, with Malebranche, can penetrate to the realm of Truth, and find therein that supreme reality to which they must adjust their lives, the poem which he builded upon the firm foundation of Cartesian science must remain one of the enduring edifices erected by the human spirit. Like all philosophic idealisms, it lives as well upon what it excludes of the life of man as upon what it singles out for especial glorification; and hence it is too narrow to represent human experience in its manifold richness and variety. Yet of that aspect which it does seize upon it has made a gorgeous poem, and he who cannot thrill with

[4] *Phil. Works of Descartes*, ed. Haldane and Ross, I, 119.

Malebranche to the beauty of the intelligible realm is afflicted with a certain blindness to the worth-while things in life.

There is, of course, a marked parallel between the poet of seventeenth century science and the poet of Greek wisdom, although, curiously enough, Malebranche cared little for Plato, and, in the true spirit of the new knowledge of Descartes and Pascal, rejected his writings along with those of the other despised ancients. It was the same contrast between the things of the senses and the things of the mind that provided the starting point for both thinkers, it was the realm in which the mind alone was at home that both deified. But the nature of that realm differed for the two profoundly: for Plato, it was the dwelling-place of the intelligible elements of that Greek wisdom that founded itself so largely upon the arts, and above all upon the art of human conduct, while for Malebranche it was the mathematical, nay, the geometrical realm where are to be found the truths and laws of modern science. The one hypostatized the teleological interpretation of nature, the other, the mechanical and mathematical. For Plato, God was the good; for Malebranche, the exact.

It is from this point of view that I desire to approach the system of Malebranche, and endeavor to display it as one of the creative visions of the human spirit. Malebranche, Christian mystic that he was, nurtured upon the great philosophy of Augustine, discovered the world of Descartes, of Newton, nay, the world in which the scientist has been exploring and adventuring ever since the Renaissance; and the result was perhaps not incomparable with what occurred when Dante discovered the world of Thomas, or Plato that of Socrates. If the all-compelling reality he found and glowingly portrayed lack the breadth and richness of the visions of the earlier and greater poets, may

it not be in part at least that modern science is a poorer and narrower interpretation of human experience than was the more humane wisdom of other cultures? Granted that Malebranche has left us no epic, he has at least produced a lyric of marvelous and haunting beauty.

What, then, was this Cartesian world in whose terms Malebranche was to sing the praises of the mind? For Descartes, reality has a determinate, unchanging, intelligible structure, a fixed scheme or order of logical relations, and the object of scientific investigation is to discover what this structure is. Knowledge is only knowledge when it has for its object this logical order; a proposition is true only when it can be placed in its correct position in this interrelated system. In taking this static structure as the essence of the intelligible aspect of the world, Descartes was of course not breaking with the past; to go no further back, he was standing in the direct traditions of the scholastics. The outstanding and revolutionary discovery that Descartes made, and the new truth that in ten years' space spread his name and his method from one end of Europe to the other, was that this structure of things, this ordered system of nature, was not teleological but mathematical. It was with this conviction that the logical relations of things are not relations of perfection, but rather relations of quantity and magnitude, relations that can be formulated, not in qualitative, but in mathematical terms, that began the whole modern knowledge of our universe we call natural science. This, after all, and not any of his more metaphysical speculations, is Descartes' chief claim to distinction: that he found that method of laying bare the secrets of nature sought for over a century by all the best intellects. Descartes discovered the mathematical interpretation of nature as a consciously formulated method and ideal; and it has been upon the mathematical interpretation

of nature that science has staked its existence from the seventeenth century to the present. When, for example, Thorndike assumes as the foundation of his psychological method that "whatever exists, exists in some quantity," he is but triumphantly carrying the Cartesian method to its fullest development.

It was, in fact, this very vision that passed before Descartes' eyes that day in the upper room, and it was confidence in this vision that the Spirit of Truth who visited him that night imparted to his profoundly agitated soul.[5] In the words of the epitaph summing up his entire life work, composed by Chanut, one of his closest friends, "In his winter furlough comparing the mysteries of Nature with the laws of mathematics, he dared to hope that the secrets of both could be unlocked with the same key."[6] In his own words in the *Regulae,* "But as I considered the matter carefully it gradually came to light that all those matters only were referred to Mathematics in which order and measurement are investigated, and that it makes no difference whether it be in numbers, figures, stars, sounds or any other object that the question of measurement arises. I saw consequently that there must be some general science to explain that element as a whole which gives rise to problems about order and measurement, restricted as these are to no special subject matter. This, I perceived, was called 'Universal Mathematics,' not a far fetched designation, but one of long standing which has passed into current use, because in this science is contained everything on account of which the others are called parts of math-

5 See the careful study of the *Crise Mystique de Descartes en 1619* made by Gaston Milhaud in his critical *Descartes Savant,* ch. II. It seems to me that Milhaud does not emphasize sufficiently that *mirabilis scientiae fundamenta* in which the Spirit bid him have confidence. (*Olympica, Oeuvres,* ed. Adam et Tannery, t. X, p. 179.)

6 Hamelin, *Systeme de Descartes,* 24.

ematics. We can see how much it excels in utility and simplicity the sciences subordinate to it, by the fact that it can deal with all the objects of which they have cognizance and many more besides, and that any difficulties it contains are found in them as well, added to the fact that in them fresh difficulties arise due to their special subject matter which in it do not exist. . . . Such a science should contain the primary rudiments of human reason, and its province ought to extend to the eliciting of true results in every subject. To speak freely, I am convinced that it is a more powerful instrument of knowledge than any other that has been bequeathed to us by human agency, as being the source of all others.'' [7] In other words, Nature, the great cipher to the solution of which all thoughtful men had been bending their efforts, was to be solved by the key of mathematics, and the intelligible side of nature was essentially mathematical in character.[8]

The first field to which Descartes applied his method of mathematical analysis was that of space geometry, and, he himself narrates, ''In the two or three months which I employed in examining (Geometrical Analysis and Algebra) . . . not only did I arrive at the solution of many questions which I had regarded as most difficult, but, towards the end, it seemed to me that I was able to determine in the case of those of which I was still ignorant, by what means, and in how far, it was possible to solve them.'' [9]

In this invention of analytic geometry, or the mathematical method applied to spatial relations, Descartes had achieved a marvelous success. His key had actually unlocked the cipher of nature, and so intoxicated did he

7 *Works*, ed. Haldane and Ross, I, 13, 11.

8 *Works*, I, 301.

9 *Works*, I, 93. For these questions, largely in the theory of equations, etc., see Milhaud, *Descartes Savant*, Ch. III.

become with the results of his endeavor that he never after lost faith in the complete validity of his method. And as he went on, applying it to other fields, to optics, to physics, to cosmology, to physiology, while he perhaps did not so easily solve all the problems there to be met, his mathematical interpretation of nature certainly did work, almost beyond his fondest dreams. And it has worked for the scientist ever since. Descartes seems to have been correct in assuming, at the very outset of our long career of the investigation of nature, that mathematics does penetrate to at least one fundamental aspect of reality. For him, however, this cautious statement of the results of his discovery would not have gone far enough. That reality expressed by mathematics was for him not merely one aspect of the world of nature: it was the only aspect. What is the world? It is nothing but extension, nothing but that which occupies space. There is nothing else. And since extension or space was precisely that field in which his mathematical analysis had succeeded best, the very essence of the world of nature was something that lent itself to geometrical and algebraic treatment. While Descartes does not of course explicitly state this as the reason for his defining matter as extension pure and simple, it is difficult for one who realizes what he has been attempting to do, not to feel that the desire to find in matter only that which will lend itself to his method of investigation plays a very large part in his denial of all other qualities in any ultimate sense to the world of nature. Matter or extension in motion, — this is the real world for Descartes: "Give me matter and motion and I will construct the universe!" And this is the world which can be handled in exclusively quantitative and mathematical terms. It is only this part of the world of everyday experience whose relations can be made intelligible; it is only this part that can be fitted

into a genuine system of scientific truths, and hence it is only this part that can in any ultimate sense be real.

It is evident that for Descartes the determining factor in his conception of what the world of nature is like was the method which he had discovered and triumphantly begun to apply. His whole ontology, as a matter of fact, and the complete mechanistic explanation he gave of nature, can be regarded as primarily the offspring of methodological considerations. The mathematical interpretation of nature he found so successful in giving him really valuable knowledge that he was "morally certain" that it must be the true one.[10] For Descartes, of course, like all those in his day who had become disgusted with the futile logic-chopping of the schools, had fixed his gaze upon a knowledge that would give real power over nature. That desire "to extend the bounds of human empire to the attainment of all things possible," which we have come to associate more closely with Bacon than with any of the early scientists, was really the common property of the age.[11] Descartes developed his mathematical method as an instrument of gaining knowledge, and through knowledge, control; and quite naturally he tended to emphasize that aspect of nature that seemed to lend itself most readily to his tool, and furnish the most effective leverage for modification.

With this pragmatic interest, it was of course also natural that he should make especially important those relations of cause and effect which are the principles both of prediction and control. Hence in his system of logical relationships, and in his body of fundamental axioms from which all other propositions were to be deduced, he was very careful to include many which, while not of a strictly mathematical nature, as the necessary basis for any truths

10 *Works*, I, 301.

11 See Descartes himself, *Works*, I, 119.

about natural objects in the world of experience, seemed to demand a most important place. Such, for example, is the old scholastic axiom: "There must at least be as much reality in the efficient and total cause as in its effect."[12] Hence, also, while admitting the primacy of a first cause, he was far more interested in the particular ways in which specific events were causally related; in his later life, secondary causes came more and more to engross his attention. Hence his increasing concern with experimentation, and his famous remark about his library.[13] Hence, moreover, came even his somewhat puzzling search for certainty, which plunged him at once into speculation in "First Philosophy," that realm whither he was loath to venture, but into which he felt everyone must go at least once in his life.[14] For the problem inevitably raised by his attempt to apply his mathematical method to the interpretation of nature, was the problem of how far he could trust that his key would really unlock the cipher. It must be remembered that his method was essentially deductive, starting as it did with a problem presented in experience, but then leaping at once to the elaboration of certain assumed axioms. For one attempting to discover facts about nature deductively, it becomes very important to know whether one's axioms are themselves true; and it was at bottom the desire to be sure beyond any doubt that his method would not fail him that led him to seek for some more secure ground of certainty than the mere intellectual intuition of the truth of his axioms.

What, then, was the world of which Descartes thought man could attain certain knowledge? What was the world

12 *Works*, I, 162; see also II, 34.

13 To a visitor inquiring for his library he pointed to a quarter of beef he was dissecting and replied, "There is my library."

14 *Works*, I, 219.

of clear and distinct ideas, the world as it really is? It was the world that lent itself to successful treatment in mathematical terms: it was essentially the world of the mechanist, the world of matter and motion united by purely quantitative relations.[15]

It was this new world of Descartes and Cartesian science that Malebranche discovered, this world that was so admirably adapted to the demands of human knowledge and human purposes. But to him it was not primarily a promise of scientific achievement. The ordered system of mathematical relations, each bound to each, all flowing naturally from first principles whose truth was obvious to every mind, appeared to him not so much a problem to be attacked and investigated, as something wondrously amazing, enchantingly beautiful. This intelligible realm of truth, this dwelling-place of things geometrical was to be contemplated, not grossly utilized. It was to be felt, to be assimilated, to be worshipped, yes — to be prayed to, — for was it not of the very essence of divinity? It was not only the intelligible side of a great universe; it was by far the most important part, — it was, indeed, the only reality. This was the *lieu des esprits*, the proper abode of the minds of men; and to enter into this realm was the be-all and end-all of existence. In discovering it Malebranche had found that for which man is; and ever after he could only sing of its glories, and seek to carry the glad tidings to all who would hearken to his message.

"No one can feel my private pain: every man can see the Truth that I contemplate. It is because my pain is a modification of my own substance, while the Truth is a good common to every mind. And thus by means of Reason I have or can have society with God, and with every

15 See *Works*, I, 164, 191.

intelligence that exists; for every mind possesses with me a common good, a common law, Reason.'' [16]

''There is no one who does not agree that all men are capable of knowing the truth; and even the least enlightened philosophers maintain that man participates in a certain *reason* which they do not define. That is why they call man *animal rationis particeps*; for there is no one who does not know, at least vaguely, that the essential character of man consists in the necessary union which he possesses with the universal reason, although it is not ordinarily known what it is that contains this reason, nor do men trouble much to find out. I see for example that two and two are four, and that I must prefer my friend to his dog, and I am certain that there is no one in the whole world who can not see this just as well as I. I do not see these truths in the minds of others, nor do the others see them in mine. There must therefore be a universal reason to enlighten me and every mind that exists. For if the reason I consult were not the same as informs the Chinese, it is plain that I could never be so sure as I am that the Chinese see the same truths as I. Hence the reason which we consult when we retire within ourselves is a universal reason.

''But if it be true that the reason in which all men participate is universal, if it be true that it is infinite, if it be true that it is immutable and necessary, it is certain that it is no different from that of God himself, for only the universal and infinite being can contain within itself a universal and infinite reason. All things created are particular beings; the universal reason can thus not be created. No created thing is infinite, the infinite reason can thus not be a creature. But the reason we consult is not only uni-

16 Malebranche, *Traité de Morale*, ed. Joly, 2.

versal and infinite, it is also necessary and independent, and we conceive it in a sense as more independent than God himself. For God can only act in accord with this reason, in a sense he is dependent upon it, he must consult it and follow it. But God consults only himself, he is dependent upon nothing. Hence this reason can not be a thing apart from him, it is coëternal and consubstantial with him. We see clearly that God can not punish an innocent man, that he can not subject the mind to the body, that he is obliged to follow the order of logic. Hence we are looking upon the logic, the order, the reason of God; for what other wisdom than that of God could we be contemplating, since we are not afraid to say that God is obliged to follow it?" [17]

In the contemplation of this divine reason Malebranche finds the chief end of rational existence. "It seems to me that the greatest good that is mine is my reason, and that if I were myself the cause of my light and my knowledge, I should be at the same time the cause of the perfection of my being." [18] "This then is our chief duty, that for which God has created us: the love of which is the mother virtue, the universal virtue, the fundamental virtue: the virtue which makes us just and perfect, the virtue which will some day make us happy. We are rational beings, and our virtue, our perfection, is to love Reason. . . . Let us then apply ourselves to knowing, to loving, to following the Order of Reason: let us labor to our perfection." [19] It is by its beauty that this order makes its chief appeal, a surpassing intellectual beauty: "O, I know well that the beauty of the rational order is more to be loved than all

[17] *De la Recherche de la Verité*, ed. Bouillier, Xe Éclaircissement, II, p. 371, 373.

[18] *Oeuvres*, ed. Simon, II, 7.

[19] *Traité de Morale*, 9.

the beauties of the senses!'' [20] Nay, in the contemplation of this beauty man achieves immortality and divinity itself, and becomes one with the very mind of God. ''Since Truth and the Order of Reason are real, immutable, and necessary relations of quantity and perfection, relations contained in the very substance of the Word Divine; he who beholds these relations, beholds what God beholds; he who orders his love upon these relations follows a law which God invincibly loves. There exists thus between God and him a perfect conformity of mind and will. In a word, since he knows and loves that which God knows and loves, he is as like as he can be unto God.'' [21]

The world of actual objects takes on for Malebranche a very minor rôle; true, it is necessary that we adjust ourselves thereto that we may live to enjoy the intelligible world, but the vague and confused knowledge we may hope to gain of it is of ''merely'' pragmatic value.[22] The whole Cartesian emphasis on the control of nature is obviously of little importance for Malebranche the poet.[23] The senses deceive, the reason alone illuminates: hence ''close, O my son, the eyes of the body, and make open those of the mind.'' [24]

20 *Oeuvres*, II, 37.

21 *Traité de Morale*, 6.

22 *Oeuvres*, I, 3.

23 "If thou wishest me to teach thee what thine enemy thinketh, what success thou wilt have in a matter of commerce, or some secret of nature, I shall have no answer for thee, for that is to beg me to give thee what I do not possess accurately in my guise of eternal wisdom and truth, or of the universal reason of all minds. Nor is that which thou demandest of me necessary to wax wise and happy. It is not the knowledge of these truths that maketh thee just and rational: 'tis not from these truths that thou canst draw sustenance. These are but facts that may well be necessary for the preservation of thy body; but it is not I whom thou shouldst consult in these straits. Ask of the senses that I have given thee, look upon thine enemy's countenance; mark his air and his manner, make inquiries of them that converse with him, and it may be that thou wilt learn that which thou desirest." *Oeuvres*, II, 31.

24 Malebranche's criticism of Aristotle is interesting in this connection.

Perhaps in no way can the peculiar flavor of Malebranche be better brought out than through a comparison of his *Entretiens sur la Métaphysique* with the Platonic dialogues. The classic beauty of Plato's settings, — the cool groves, the gymnasium, the temple, or, best of all, the Ilissus with its clear waters and its plane trees, — forms a striking contrast to the sober outward scene wherein the *Entretiens* are laid. Withdraw into the subdued light of the chamber, where nothing sensible, not even too great darkness, can distract the attention of the mind from the dazzling intellectual beauty that lies ever ready for the delectation of the reason. This outward austerity serves but to heighten the inward beauty of the order of pure form. It is the world of the mathematician, the geometer, to which Malebranche gives his undivided allegiance.

One needs only to compare the geometrical world of Malebranche with the world of Descartes to see how those points on which the two differed are to be attributed directly to the entirely divergent interests of the scientist and the poet-mystic. Not only did Descartes arrive at this mathematical world in the search for a method of solving the great riddle of nature, and through that knowledge controlling her actions; throughout it was his interest in practical control that dictated what were the real and essential features of nature. In Malebranche these elements are quite lacking.

In the first place, the fundamental urge that led Descartes from the practical field of positive science to the more dubious ground of First Philosophy, the necessity of a rational guarantee for the applicability of his mathemat-

"He has no doubt that a ball that strikes another has the force to set it in motion. So it appears to the eyes, and that is enough for this philosopher, for he almost always follows the witness of his senses, and rarely that of his reason; whether the former be intelligible or no he hardly troubles to ask." *Recherche,* ed. Bouillier, II, 439. (*Oeuvres,* II, 51.)

ical method, is in Malebranche totally wanting. The search for certainty plays no part in his philosophy, save as he repeats mechanically the old Cartesian formulae.[25] Hence he need not prove the existence of God as an epistemological guarantee that his reason, in giving him the criterion of clearness and distinctness, is not playing him false, and that he may safely trust his senses to give him valid knowledge. Indeed, for Malebranche it is not God who is the guarantee of the existence of knowledge, but it is, as we have seen, the very fact of the existence of this eternal and invariable realm of truth that is the basis of his belief in God.

It is even more illuminating to compare the direction in which Malebranche developed the Cartesian notions of causation from their foundations in Descartes. The latter, of course, recognized the efficacy of the primary cause in all physical changes, and made it an important concept in his First Philosophy. But one need only dip into his discussions of physics and physiology to realize that for the practical investigator of nature it was the secondary causes that gave real insight and control. But while Descartes himself and the great body of scientists who followed his lead emphasized the particular causes that resulted in natural phenomena, Malebranche and the metaphysicians gave greater and greater prominence to the other element in the Cartesian notion. They came more and more to see in every natural event the great force of God or Nature. To them even the simplest form of mechanical causation took on the semblance of the continual miracle of creation. To these dwellers in the realm of mind existence itself had become something arbitrary and unintelligible.

25 See *Oeuvres*, I, 5; *Méditations Métaphysiques*, ed. Feuillet de Conches, 3. The *Recherche* is a consideration of the methods for reaching certain knowledge in particular cases, not a metaphysical foundation of knowledge in general.

This is the significance of that critique of the concept of causation so prominent in the later Cartesianism. It sprang in part from the ambiguity and vagueness with which the idea of cause as force or power was invested; this purely scientific criticism can be traced, through Malebranche and Hume, to the practical elimination of causality as a modern scientific concept. But the exponents of occasionalism, having expelled causation from matter, found it all the more necessary to locate it somewhere else. And where more naturally than in God? To the Oratorian, steeped in the Augustinian sense of God as the great fount of all being, the sustainer of existence from moment to moment, this side of Cartesianism had a most potent appeal. Did it not make God very real and very near to see him in every change and motion that came to pass? To Malebranche, for whom the conception of a miracle as an interruption in the laws of nature was anathema, the whole of existence became one great miracle shadowing forth divinity.

For him, as for seventeenth century science in general, all causation was reduced to the changes of position effected by motion. No other idea possessed the clearness and distinctness of true knowledge.[26] But even this fundamental concept of mechanics would not bear rigid analysis. The transfer of motion was a fact, to be sure, but an unintelligible fact, a brute datum. For Descartes, motion was a force, possessed of reality independent of the parts of matter to which it could be added.[27] To the penetration of Malebranche motion was rather a mode of bodies, a concept by which their changes could be described, but not explained. "There are many reasons," he says,

26 *Oeuvres*, II, 55, 56.

27 Hence his law of the conservation of motion; and hence also, his distinction between quantity and direction of motion that made possible his interactionism. See *Traité du Monde*, *Oeuvres*, ed. Cousin, IV, 221.

"which prevent me from attributing to secondary or natural causes a force, a power, an efficacy to produce some effect. But the principal is that this opinion seems to me inconceivable. However great an effort I make to understand it, I can find in myself no idea which will represent to me what the force or power attributed to things created can be. And I do not think I am making a bold judgment when I say that those who maintain that created things have in themselves any force or power, are advancing something of which they have no clear conception. For if the philosophers clearly conceived that secondary causes possess a veritable force to act and to produce results similar to themselves, being a man like them, and participating like them in the sovereign reason, I could apparently discover the idea which represents to them this force. But whatever effort of mind I make, I can find no force, efficacy, or power save in the will of the infinitely perfect being. . . . When I see a ball strike another, my eyes tell me, or seem to tell me, that it is truly the cause of the movement it imparts; for the true cause which moves bodies does not appear to my eyes. But when I question my reason, I clearly perceive that bodies not being able to move themselves, and their moving force being only the will of God that preserves them successively in different positions, they can not communicate a force that they do not possess, and that they could not even communicate it if it were at their disposal. For the mind will never conceive how a body, a substance purely passive, can transmit to another the power which moves it, even though it be true."[28] Thus, so far as phenomena are concerned, Malebranche anticipates Hume in reducing all causation to an observed connection between events; for as to the laws of

[28] *Recherche*, ed. Bouiller, II, 437, 440. See also *Oeuvres*, II, 50, 51; and I, 149, 159.

nature he is a thoroughgoing empiricist.[29] But he robs events of their efficacy only that it may redound to the greater glory of God.

Now of course this so-called occasionalism led directly to the purification of science of other than purely descriptive concepts. But in concentrating all the force in the universe and attributing it to one great first cause, Malebranche is clearly much more concerned with the formulation of a proper attitude toward the universe as a whole than with the investigation of the changes of its parts. Though his view made possible a better science than that of Descartes, it was as a philosopher and poet rather than as a scientist that he developed it. For in making of motion a thing dependent upon the "natural revelation" of the senses rather than a rational concept, he at the same time removed it from the realm of intelligibility, and cut the very nerve of Cartesian physics.

This is very clearly marked in his exclusion of the whole of created nature from the intelligible realm. The logical and mathematical relations between things, the geometrical structure of the world — that is indeed the only fit object of science. But particular events, even the invariable causal relationship, are not really intelligible, because they are at bottom *arbitrary*. There is in them nothing of the logical necessity that characterizes the realm in which reason holds sway. They do not fit into that unified body of mathematical knowledge that constituted science for the seventeenth century. That science had discovered the structure of the world, the limits within which possible events must take place. But it had not succeeded in fitting into that logical structure the events of experience themselves. Those events it knew to be mechanically determined. But why should they be determined in this partic-

29 *Rech.*, II, 188, 247.

ular way rather than in some one of the many other logically possible ways?

Descartes felt this problem of the arbitrariness of the causal laws of nature, and at this point had to resort to experimental inquiry. "The principles which I have explained above," he says, "are so ample that many more things can be deduced from them than we see in the world, and even more than we develop in thought during our whole life. That is why I shall make here a brief description of the principal phenomena whose causes I am investigating; not to draw from them the reasons to prove what I have to say hereafter, for it is my intention to explain effects by their causes, and not causes by their effects, but that we may choose from an infinity of effects which can be deduced from the same causes those which we are to attempt to deduce from them." [30]

Malebranche too felt keenly this arbitrariness, not of the particular phenomena, but of the causal laws governing the phenomena. "The creation of matter is arbitrary and dependent upon the will of the Creator. . . . Created things suppose in God free decrees which give them their being. . . . As to the existence of created things, . . . it is clear that it can be discovered only by a kind of natural revelation, that is to say, by the sensations which God gives us, in consequence of the general laws of the union of mind and body." [31] Even the fundamental physical science of mechanics itself Malebranche, breaking with Descartes, finds infected with this arbitrariness that must accept without real comprehension what experience gives.[32]

30 *Oeuvres*, ed. Cousin, III, 182.

31 *Traité de Morale*, 2; *Rech.*, II, 244, 247; see also *Oeuvres*, I, 10; II, 53.

32 "Since we cannot compass the designs of the Creator, nor comprehend all the relations they have to his attributes, to preserve or not to preserve in the universe an equal absolute quantity of motion, this seems to depend on

Hence it is we find him virtually excluding all of physical science from the realm of valid knowledge, a thing that would have horrified Descartes, who staked his all upon the complete intelligibility of nature.

But Malebranche was by no means isolated in this distrust of natural as opposed to mathematical science. How strong the feeling was in that age is forced upon us by the case of Locke, whose struggle to combine a naturally empirical temperament with the rationalism of seventeenth century science is well known. In that groping fourth book of his *Essay* he too relegates a knowledge of nature to the realm of mere probability. But Malebranche, without Locke's interest in control, lacked also his complacency in the face of such a probable knowledge.

Two further points remain to illustrate the relation between Malebranche and Descartes. The first is the complete absence in the later thinker of those scholastic axioms which seemed to Descartes to be clear and distinct ideas; "*ex nihilo nihil fit*" is a fair example.[33] Descartes retained these axioms in part at least as necessary hypotheses in his investigation of natural forces. But Malebranche has purified his Cartesianism of all such extraneous elements, and, freed from some of its founder's inconsistencies, it perhaps lacks also his close touch with the facts of experience.

The second point is the difference in the use of that potent source of misunderstanding, the term "idea." Descartes starts with the common Thomistic definition of his day, "An idea is the thing thought of itself, in so far as it is objectively in the understanding," *secundum esse quod habet in cognoscente*.[34] He divides ideas into three classes,

a purely arbitrary volition of God, of which in consequence we can only learn by a kind of revelation such as experience gives." *Rech.*, II, 188.

33 *Works*, I, 239.

34 *Works*, II, 9.

Ideae Adventitiae, Ideae a me ipso factae, and *Ideae Innatae.*[35] The first are the "ideas" of sense-objects: they are "like pictures or images."[36] Their clearness and distinctness is perceptual, and extends only to their mathematical properties and relations.[37] The third class comprises two groups: the "essences," or "simple natures," which are mathematical universals;[38] and the "eternal truths" or "common notions," which are the simple propositions that Descartes intuitively perceives to be true.[39] Strictly speaking, it is of only this last group that Descartes is thinking when he founds all rational knowledge upon "clear and distinct ideas;" for only of these axioms can we affirm truth or falsity.[40] The *ideae adventitiae* and the "simple natures" are but the elements of which propositions are made.

It is thus clear that Descartes employs the term "idea" in a very broad sense, to cover sense perceptions as well as essences. He is not willing to exclude sense-objects from the realm of rational knowledge. With Malebranche it is quite otherwise. His distinctive concepts are revealed most clearly in the writings that sprang from the controversy with Arnauld, following upon the latter's attack in *Des Vraies et des Fausses Idées.* Arnauld is undoubtedly the better Cartesian; he maintains clearly and explicitly the interpretation of "idea" and the theory of perception which Descartes seems to have held. For him an idea is both knowing and knowledge, both the effect of an object upon the mind and that through which the object is known. The mechanical explanation of secondary qualities made

35 *Works,* I, 160.
36 *Works,* I, 163.
37 *Works,* I, 164.
38 *Works,* I, 179, 180, 243.
39 *Works,* I, 238.
40 *Works,* I, 164.

him, like Descartes, a complete representationalist,[41] as regards sense objects.[42]

First, Malebranche excludes from knowledge all of Descartes' *ideae adventitiae*. Sense objects are perceived, not through ideas, but through "*sentiments confuses.*"[43] He limits the use of "idea" rigorously to the *ideae innatae* of his master, to essences and the relations between them; indeed, finally to essences alone, for relations we perceive directly without the intermediary of any ideas. They are intelligible in themselves. To him, ideas are "that which is the immediate or closest object of the mind when it perceives some object;"[44] that is, they are that aspect of the thing that is intelligible, its essence. He loves to cite the Platonic definition of Augustine: "Ideas are certain first models or stable and immutable archtypes of things, which have not been created, and which in consequence are eternal and always the same in the eternal wisdom that contains them."[45] Hence he insisted against Arnauld that the ideas are the object of knowledge, that which is known, and not the affection of individual minds by which they are known.[46] Perceptions and ideas, for Descartes and Arnauld identical, he carefully distinguishes. They are as dissimilar as receiving and giving.[47] Ideas are not in any sense subjective. They are not the denizens of particular minds, but dwellers in the unchanging realm

41 Arnauld, *Oeuvres Philosophiques*, ed. Simon, 52.

42 See Descartes' *Traité du Monde*, ch. 1. Although throughout Arnauld assails Malebranche for introducing unnecessary *êtres representatifs*, the word is used in the sense of exemplarism, and has no subjective reference. It is Arnauld who is the real representationalist, in the sense of believing that we know our perceptions which are the images of external objects. Malebranche, who believes we perceive the ideas or intelligible principles of objects directly, is a realist, like Berkeley.

43 *Rech.*, ed. Bouillier, II, 384.

44 *Oeuvres*, III, 373.

45 See also *Rech.*, II, 245.

46 *Rech.*, II, 246; Arnauld, *Oeuv. Phil.*, 311-316.

47 *Réponse á la IIIe Lettre d'Arnauld*, 47.

of essences whose contemplation is the delight of God himself.

In fact, Malebranche could properly be called an Augustinian Platonist if it were not that Cartesian mechanism has utterly routed all the Platonic teleology. The ideas are not the ends at which objects aim, the functions they serve, but the geometrical structure that determines their relationships.

Just as Plato and Aristotle elevated the Hellenic ethics into a metaphysics of universal sweep and validity, hypostatizing into eternal realities the concepts that seemed to that age to possess the greatest value, so Malebranche created out of the mathematical methodology of Cartesianism a not entirely dissimilar world view. He became the prophet of the religion of the new science; it was but natural that if for the Greeks God was transformed into the highest concept of ethics, the supreme final cause, for Malebranche he became the realm of geometrical space. Reality has been purged of everything else, — yes, even of the souls of men. It is into this classic realm that we must follow Malebranche.

This was his great discovery: that the mind dwelt not in the gross world of trees and grass and stones, but in a far more glorious universe, a universe whose intellectual beauties made all earthly beauties pale. This is the *monde intelligible*, the *lieu des esprits*, as the material world is the *lieu des corps*.[48] "'Tis in this world that we are and live, though the body we inhabit lives and moves in another. 'Tis this world that we contemplate, that we admire, that we feel. But the world upon which we look, or which we gaze upon when we turn our head from side to side, is but matter in itself invisible, which has none of the beauty we admire and feel in beholding it."[49] This is the world

[48] *Oeuv.*, III, 409.
[49] *Oeuv.*, I, 12.

that is known, the world that is rational. In itself the sense world is not intelligible.[50] It becomes known only when illuminated by the light of reason. This reason, this "*soleil des esprits,*" is the eternal wisdom, the universal, immutable, and necessary reason that lights all men and makes them rational.[51] Intoxicated by the glories of this universal reason, Malebranche identifies it with the second person of the Trinity, with the Divine Logos or Word of the Alexandrians. 'Tis the very mind of God in which man is privileged to think God's very thoughts.

But let us inquire a little more closely just what elements of knowledge Malebranche thus deifies. What is the content of the *Verbe Éternel*? What is the object of rational knowledge? On this point the answer is clear and illuminating. Knowledge is knowledge of the relations of quantity and perfection.[52] "Relations of quantity are between the ideas of beings of the same nature, as between the idea of a yard and the idea of a foot; and the ideas of the numbers measure or express these relations exactly, if they are not incommensurable. Relations of perfection are between the ideas of beings or modes of being of a different nature, as between body and spirit, or roundness and pleasure. But thou canst not measure exactly these relations. It sufficeth that thou understandest that the mind, for example, is more perfect and more noble than the body, without knowing exactly how much."[53] No other wisdom will the

50 *Rép. á la IIIe lettre d' Arnauld*, 31.

51 *Oeuv.*, II, 8.

52 "In contemplating the intelligible substance of the Word, which alone makes me and every mind there is rational, I clearly see *relations of quantity* between the intelligible ideas which it contains; and these relations are the same eternal truths that God beholds. For God sees as I do that two and two are four, and that triangles with the same base and between the same parallel lines are equal. I can discover also, at least confusedly, *relations of perfection*, which form the immutabe Order that God consults when he acts: the Order which must thus rule the thought and love of every mind." *Traité de Morale*, 3. See also *Oeuv.*, 39, 347, II.

53 *Oeuv.*, II, 40.

Verbe Éternel impart.[54] There is, to be sure, another kind of knowledge, knowledge *par sentiment intérieur*; but this is hardly worthy of the name of knowledge. " 'Tis by the light of reason and by a clear idea that the mind sees the essences of things, numbers and extension. 'Tis by a confused idea or by feeling that it judges of the existence of created things, and that it knows its own." [55]

Several interesting points are herein revealed. First, Malebranche is very obviously identifying the wisdom of the Eternal with that known to the investigators of the seventeenth century. Could there be given a more complete metaphysical foundation to the mathematical interpretation of nature? Gone is every element of reality that refuses to lend itself to geometrical treatment. Most surprising of all is Malebranche's greatest heresy from Cartesianism: there is no place in the intelligible world even for the soul, which, from the most clear and distinct of all ideas, becomes the most confused and vague. And why? Because it is not an object of geometry. "The soul does not know itself by an idea which it can contemplate, to discover the properties which it possesses, as do the geometricians, who contemplate the idea which they have of extension and discover its relations: it knows its own being only by the internal feeling which it has of its own existence." [56]

Only one kind of relation other than geometrical will Malebranche admit, and that is the relation of perfection, in which we have seen him try to discern a quantitative notion. This is for him extremely important, since upon it depends his whole ethical theory; but there is clearly great doubt for him as to the propriety of making even such a compromise with his fundamental principle of re-

54 *Oeuv.*, II, 31, 32.
55 *Rech.*, II, 384.
56 Arnauld, *Oeuv. Phil.*, 315. See also *Oeuv.*, III, 413.

jecting all qualitative differences. There is here an interesting parallel with that other reviser of the Cartesian tradition, John Locke, who similarly cherished the notion of setting morals along side of mathematics as the only complete deductive sciences.[57]

Finally, in comparing this metaphysics of Malebranche with that of Descartes, there is evident a much greater confidence in the power of reason to attain to truth, and in the mathematical truth which it discovers. Where to guarantee the validity of his mathematical interpretation of nature Descartes was driven into First Philosophy and into establishing the existence of God, Malebranche accepts geometry as true beyond peradventure of doubt, and finds his metaphysics in asserting that fundamental reality. God is not for him the guarantee of truth: he is truth itself, the intelligible aspect of the universe.

This contrast is due in part to the Platonic confidence in reason which Descartes of course did not share, and in part, also, to the difference between a pioneer blazing a new path with nothing to rely upon save his own discoveries, and the heir to what had already grown a rich tradition. But perhaps the chief reason lies once more in the divergency of interests between the two. Descartes the scientist, utilizing the mathematical interpretation as a guide to the realities of nature, could never forget how miserably the old guides had failed; Malebranche the poet was absorbed in contemplation of the beauties of the new world unfurled before his eyes that was its own excuse for being. Hence the latter's repeated insistence upon the complete independence of the truths of the intelligible world from even the will of God himself. "It has always been true that two and two are four, and it is impossible that it could ever become false. This is clear, without it

57 See *Essay*, IV, ch. iii, par. 18 ff.

being necessary that God as sovereign legislator should have ordained these truths, as M. Descartes maintains.'' [58]

But, it may well be asked at this point, granted we have here a vision of immense power, granted that Malebranche has come upon a very real aspect of the universe; what has in the meantime become of the everyday world of the common man? Whither has vanished the furniture of earth and the choir of heaven? What is left of the sensible realities so dear to the heart of Berkeley? It must by this time be apparent that whatever meaning we assign to the term ''idealism'' it can scarcely be applied both to the system of the Englishman and that of the Frenchman.

This brings us to Malebranche's theory of the sensible world and our perception of it. Though this part of his thought was of but subordinate interest to him — his heart lay rather in the true *lieu des esprits,* the *monde intelligible* — it naturally aroused the greatest criticism among his contemporaries; and, it must be confessed, though when judged by the requirements of the physicist it is unquestionably sound, it is the part of Malebranche's system open to the most serious objection. Since the objects of knowledge hitherto considered have belonged entirely to the intelligible realm, they are accordingly directly perceived; here Malebranche's realism is thoroughgoing.[59] But, as we have seen, the world of actual existence is not completely intelligible; it contains an intelligible aspect concealed under a mass of sense qualities that are known only *par conscience* or *par sentiment intérieur.* What real knowledge, therefore, we can hope to possess of it must be a knowledge of this intelligible aspect. Now, the very essence of nature for the seventeenth century scientist was of course extension or space; hence that part of nature that

58 Cf. Descartes, *Works,* II, 248, 251.
59 *Oeuv.,* III, 410.

can alone be truly known must be "*l'étendue intelligible*," intelligible space. This is the Cartesian mathematical equivalent of the Aristotelian intelligible forms. It is the object of geometry, and, indeed, of all science that founds itself upon geometry: it is the "ideal space" with which the geometrician deals.[60] It is not in itself actually extended; it were meaningless to seek the dimensions of the universal or essence "triangle."[61] But none the less it is in no sense subjective, the exclusive property of any particular mind.[62] "This intelligible space is nothing but the very substance of God, in so far as it is representative of bodies, in which they participate with the limitations or imperfections proper to them; and these limitations are represented by this same intelligible space, which is their idea or archetype."[63]

In this intelligble space are contained the ideas or essences — the Cartesian "simple natures"— of all the particular sense objects in the world. "To see a sense object, the sun, a tree, a house, etc., there are necessary two things, the *modality of color*, for M. Arnauld agrees that color is a modification of the mind, and a *pure idea*, that is, the idea of extension or intelligible space; for when we have a lively impression of light, attached or related to an intelligible circle distant a certain intelligible space, rendered sensible by different colors, we see the sun, not as it really exists, but as it is possible for us to see it."[64] "For, God exciting sensations in us in the presence of objects by an action that contains nothing of sensible and that we do not perceive, we imagine that we receive from the object not only the idea which represents its essence, but also the feeling which

60 Arnauld, *Oeuv. Phil.*, 326, 328.
61 *Oeuv.*, I, 13.
62 *Oeuv.*, I, 14; *Entretiens sur la Mort*, II.
63 *Oeuv.*, I, 186; see also I, 27, 32.
64 Arnauld, *Oeuv. Phil.*, 315. See also *Rech.*, II, 241.

makes us judge that it actually exists; for there are always both a pure idea and a confused feeling in our knowledge of the existence of objects, that of God and of our own soul alone excepted."[65]

What are these "ideas" or "essences" of bodies, perceived in intelligible space? They are of course all their quantitative and measurable geometrical properties." "Pleasure, pain, taste, heat, color, all our sensations and all our passions are modifications of our soul; but though that be true, do we know them clearly? Can we compare heat with taste, odor with color? Can we recognize the exact relation between red and green, even between green and green? It is not thus with figures: We compare them with each other, we recognize exactly their relations; we know precisely that the square of the diagonal of a square is double the square itself."[66] Extension and motion: these are only aspects of sense-objects that can be clearly perceived, and hence that can form a part of their ideas.[67] To motion, and to motion alone, must be attributed every change in our great complex universe.[68]

What is the significance of this theory of our knowledge of the sensible world? It is easily seen that it singles out the quantitative aspects of nature as the intelligible ones, and maintains that there can be a real natural science only when nature can thus be treated throughout in mathematical terms. It is the metaphysics presupposed by all mechanistic science. Here again there is a parallel in Locke; for what are these "ideas" of Malebranche but the "real essences" of things which Locke opposes to his "nominal essences?"

There can thus be no doubt that in singling out certain

65 *Rech.*, II, 385.
66 *Arnauld*, 316.
67 *Rech.*, II, 203.
68 *Oeuv.*, I, 239.

kinds of knowledge, and identifying them with the divine logos, Malebranche is in every particular deifying the mathematical conception of nature. He is formulating the religion of the mathematical physicist. For this knowledge of the geometrical structure of the world is a revelation of God himself. This intelligible realm, this world of pure mathematical form, is not a thing created like unto other things, — it is for Malebranche the Divine Wisdom, the *Verbe Éternel*, the Second Person of the Trinity,— it *is* God himself, just in so far as he can be known by mortal mind.[69] For what can God be but Being, mathematically determined Being? In the words of Jehovah to Moses, which Malebranche never tires of quoting, "I am that which is." [70]

This is the vision that came to Malbranche, the great discovery that filled his soul to overflowing and impelled it to utterance. It is the vision of a poet and a seer; it is the vision of one for whom reason is divine. Not to every man is it given to enter upon the intelligible realm, and share in the mind of God. Only those who have served a long apprenticeship of study and intellectual toil can hope to be touched by its beauty; but to those upon whom there has burst this vision of the immutable logical structure of the world, it is truly divine, it is indeed God. So tells us Bertrand Russell, perhaps of all contemporaries he who shares most deeply and completely the mathematician's faith of Malebranche:

"Mathematics, rightly viewed, possesses not only truth, but supreme beauty — a beauty cold and austere, like that of sculpture, without appeal to any part of our weaker nature, without the gorgeous trappings of painting or music, yet sublimely pure, and capable of a stern perfection

[69] III, 405, 406, *Oeuv.*
[70] *Exodus* III, 14 Quoted *Oeuv.* I, 29.

such as only the greatest art can show. The true spirit of delight, the exaltation, the sense of being more than man, which is the touchstone of the highest excellence, is to be found in mathematics as surely as in poetry. What is best in mathematics deserves not merely to be learnt as a task, but to be assimilated as a part of daily thought, and brought again and again before the mind with ever renewed encouragement. Real life is, to most men, a long second-best, a perpetual compromise between the ideal and the possible; but the world of pure reason knows no compromise, no practical limitations, no barrier to the creative activity embodying in splendid edifices the passionate aspiration after the perfect from which all great work springs. Remote from human passions, remote even from the pitiful facts of nature, the generations have gradually created an ordered cosmos, where pure thought can dwell as in its natural home, and where one, at least, of our nobler impulses can escape from the dreary exile of the actual world." [71]

Need we wonder, then, that to Malebranche this seemed as God? Need we wonder that he could fall upon his knees and worship this divine wisdom? Need we wonder that he could indite this true mathematician's prayer?

"O Eternal Wisdom, in no wise am I a light sufficient unto myself; and the bodies that surround me cannot give me light; even the minds of men, utterly lacking in their being, reason to make them wise, cannot impart that reason to my soul. Thou alone art the light of angels and of men; thou alone art the universal reason of all minds; nay, thou art the wisdom of the Father, wisdom eternal, unchanging, necessary, who makest wise all beings that are created and the Creator thereof himself, though in a way quite different. O my true and only master, discover thyself to me, in thy

[71] Russell, *Study of Mathematics*, in *Mysticism and Logic*, p. 60.

light make me to see light. I turn but to thee; I desire to take counsel only of thee. Speak, Eternal Word, Logos, Word of the Father, word that hath forever been proclaimed, is now, and ever shall be; speak, and speak so loud that I can hear thee despite the babel of noise with which my senses and my passions assail my soul without surcease.

"But, O Jesus, I implore thee to speak in me only for thy glory, and to make me to know only thy greatness; for all the treasures of the wisdom and of the knowledge of God himself have their being in thee. He who knoweth thee knoweth thy Father, and he who knoweth thee and thy Father enjoyeth perfect bliss." [72]

[72] *Oeuv.*, II, V.

EMPIRICISM AND EPISTEMOLOGY IN DAVID HUME

Sterling P. Lamprecht

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During the eighteenth century there appeared a number of philosophical works with titles of a sort peculiar to that one period of European thought. Beginning with Locke's *Essay concerning the human understanding* in 1690, this series of works continued through Berkeley's *Treatise concerning the principles of human knowledge* in 1710, Hume's *Treatise of human nature* in 1739 and *Enquiry concerning the human understanding* in 1748 (1758), Reid's *Inquiry into the human mind on the principles of common sense* in 1764, Kant's *Critique of pure reason* in 1871, Stewart's *Elements of the philosophy of the human mind* during the years 1792 to 1827, followed by works from a kindred point of view in the nineteenth century from the pens of Brown, Hamilton, and Cousin.

In spite of wide variety in the opinions expressed in these works, there is a common element which runs through them all and determines largely the outcome of the systems formulated. This common element is the supposition that in order to know the world one must first know his own mind. Whether the nature of reality is itself dependent upon the activity of mind or not, at least it is agreed that knowledge of reality must begin with knowledge of the structure, function, and habits of the mind. The fact that in order to know a thing the mind must be present is regarded as significant about the thing known. The process of knowing somehow affects the thing known and thus

determines the thing's nature and status. Philosophy, whether it ever gets any further or not, at least must begin with psychology. It is this approach which created the epistemological problem with which modern philosophy has been so conspicuously concerned.[1]

No better statement of this accepted doctrine of epistemology could be formulated than that contained in the introduction to Hume's *Treatise*. Practically all the writers mentioned above could agree with Hume that "all the sciences have a relation, greater or less, to human nature."[2] For all the sciences, even mathematics,[3] depend in some measure at least on the science of man. To explain the principles of human nature is to make a complete system of all the other sciences; and to neglect the principles of human nature is to neglect the fundamentals of all knowledge, and thus to cut oneself off from the possibilities of scientific knowledge altogether. "There is no question of importance whose decision is not compriz'd in the science of man."[4]

The sole and, as it is often said, the sufficient argument for making the science of human nature central in all theories about the world or anything in the world is, for Hume as for all the other chief writers of the eighteenth

1 The term epistemology will be used in this paper exclusively to denote the point of view which assumes the validity of the psychological approach to all investigations of reality and then speculates on that basis concerning the nature of the world. Other problems in a general theory of knowledge and often spoken of as epistemological will not be indicated, directly or indirectly, when the term epistemology is here used. Those problems are often significant for any philosophy, however empirical, even when epistemology in the precise sense here defined is rejected as a wholly false point of view.

2 I, 306. (All references to Hume in the footnotes of this paper are to the edition of Hume's works by Green and Grose. The Roman numerals are to the volumes, and the Arabic numerals to the pages.)

3 Hume changed his views on mathematics before 1748 when the *Enquiry* appeared; and even in the *Treatise* he excepts arithmetic and algebra from this rule. I, 374; IV, 50.

4 I, 307.

century, the Lockian principle that the mind in thinking has no other objects than its own ideas. The terminology of the writers may differ from that of Locke; but the principle itself is not modified. The opening words of the first book of Hume's *Treatise* direct our attention to the subject matter of his investigation as being "all the perceptions of the human mind."[5] And repeatedly we find such confident statements as the following: "Nothing is ever really present with the mind but its perceptions or impressions and ideas."[6] Or again: "Nothing can ever be present to the mind but an image or perception."[7] Hume, it may well be said, carries out the logic of this generally accepted principle more thoroughly than any other of the British writers. We are assured that we do not perceive either body or mind, and hence can know nothing of their nature. What we call body is only a group of "certain impressions which enter by the senses;"[8] and what we call our mind is "nothing but a bundle or collection of different perceptions which succeed each other with an inconceivable rapidity."[9] The real essence of both external bodies and mind is utterly unknown; and the powers and qualities of those things must be learned, if at all, from experiments and observations upon their effects, namely, from the impressions to which they give rise.[10] "External objects become known to us only by those perceptions they occasion."[11] And it can not be insisted too much that Hume is prone to regard the content of perception as what has come to be called since his time "psychic states." Impressions differ from ideas only in being more vivid, not in being of a different

5 I, 311.
6 I, 371.
7 IV, 124-5. Cf. also I, 480, 483, 487, 499, 523.
8 I, 481.
9 I, 534; cf. also I, 495.
10 I, 308.
11 I, 371.

order of existence. They are "in the soul" as much as any images of the fancy, and simply "strike upon the mind and make their way into our thought or consciousness" with more force and liveliness than do ideas.[12] Impressions and ideas "differ only in degree, not in nature;"[13] "all perceptions are the same in the manner of their existence."[14]

Like most of the writers of his century, Hume took up the problem of the source whence come our first impressions of sensation. On this point he is not consistent throughout. On the one hand, he sometimes contrasts perceptions with a supposed existence of a different kind outside of and inaccessible to mind. What that supposed existence is like, Hume is not sure, though he inclines to the theory of the physicists which had already influenced greatly both Hobbes and Locke. According to two passages, impressions come "from unknown causes;"[15] and it is said to be quite impossible to determine whether this unknown thing is some material object, the creative power of the mind, or the suggestion of God or some other invisible spirit.[16] According to at least four other passages in the *Treatise*, Hume breaks through the logic of his own position and asserts that "we may certainly conclude that motion may be, and actually is, the cause of thought and perception."[17] That

12 I, 311.

13 I, 313.

14 I, 483.

15 I, 317.

16 I, 385; IV, 125. It is exceedingly interesting to note the three possible sources of sensations which Hume lists in these two passages. The first would be approximately equivalent to the theory of Locke; the second, to the theory of the Cambridge Platonists; and the third, to the theory of Berkeley. Thus Hume grants the possible truth of each of the important epistemological positions which earlier British writers had suggested. It is important to add, however, that in the *Enquiry* Hume practically rejects the Berkeleyan epistemology as being both unproved and too fantastic: "we are got into fairy land." IV, 59-60.

17 I, 530.

is, he can not free himself from the prevalent scientific attitude of his day, and unguardedly speaks of perceptions as "arising from the particular configurations and motions of the parts of body."[18] But in all these passages alike, Hume regards perceptions as mental existences caused by a non-mental external something.

On the other hand, Hume ends both the epistemological part of the *Treatise* (Book I) and the *Enquiry* with a rejection of epistemological dualism between perceptions within the mind and an unknown or material something outside the mind. In his discussion "of the sceptical and other systems of philosophy,"[19] Hume comes to the conclusion that the Lockian tradition leads only to futility. There are, he states, three gradations of opinions, namely, "that of the vulgar, that of a false philosophy, and that of the true."[20] The vulgar view supposes that the objects we perceive continue to exist just as we perceive them even when we are not perceiving them. This view, though it is "the most natural of any, and has alone any primary recommendation to the fancy,"[21] can not withstand the ordinary arguments for the dependence of sensations upon the sense-organs of the person perceiving them. The view of a false philosophy, however, which rejects, and properly, the naive realism of the vulgar, pins its faith in objects, unperceived and unperceivable and usually unlike those which are perceived and postulates the continued existence of these hypothetical objects as the causes of our fleeting perceptions. This view which Hume calls "false" is that of

18 I, 483. Thus in spite of acknowledging that the epistemology of both Cambridge Platonists and Berkeley can not be refuted if their premises are accepted, Hume, with those same premises, even then inclines to the Lockian position. In so doing he is closer than any one else for a century to the position of Hobbes.

19 *Treatise*, Book I, Part IV.

20 I, 508.

21 I, 500.

the "academical" tradition [22] which had come down to him from Locke, and which he seems often to be accepting (as the preceding paragraph pointed out). He regards it as exposed to "all the difficulties of the vulgar system, with some others that are peculiar to itself." [23] It is even more removed from the truth than the vulgar view.[24] For when matter is deprived of all its known qualities, primary as well as secondary,[25] it become so meaningless as not even to be worth contending against.[26] The view of a true philosophy Hume does not develop in these sections; but it evidently is one which would avoid the errors of the other two gradations. Hence it would neither claim the continued existence of perceptions when unperceived, nor postulate the existence of objects of an entirely different kind and order from those we do perceive. Hume thinks that under the influence of Berkeley (and possibly also of his own *Treatise*) the academic tradition of the Lockian type was in 1740 weakening; for when he put out in that year an appendix to Book I of the *Treatise*, he asserts that "philosophers begin to be reconcil'd to the principle *that we have no idea of external substance distinct from the ideas of particular qualities.*" [27]

Thus in accepting the current epistemological tradition, Hume, though he carried it through more logically, finds himself reduced to scepticism. He had come to the position that the only existences are inert perceptions, which can alone be known, but which account for nothing, not even their own existence. In calling this position sceptical, it is important to note just what Hume means; for he does

22 Cf. caption of Section XII of the *Enquiry*.

23 I, 499.

24 I, 508.

25 Space does not permit the review here of the Berkeleyan arguments which Hume accepts for considering primary and secondary qualities to be of the same metaphysical status. Cf. I, 513-6; IV, 126.

26 IV, 127.

27 I, 559.

not give to the term *sceptical* the meaning ordinarily attached to it. Those opinions are called sceptical which "admit of no answer and produce no conviction," and the effect of which is only to produce "momentary amazement and irresolution and confusion." [28] Hence the outcome of the Lockian point of view with which Hume starts is one which he can not refute and yet can not accept. Scepticism amounts only to acknowledging that there is something the matter with the conclusion even though the premises are seemingly true and the reasoning from the premises sound. It is not properly scepticism as to the existence of a real world, but it is a confession that he can not escape the dialectic of a curious argument. Hume asserts that the Lockian principles "may flourish and triumph in the schools where it is indeed difficult, if not impossible, to refute them." [29] But he does not take the outcome seriously: he does not believe that any one will take it seriously outside the circles of academic seclusion, or will attempt to use it as a basis for practical affairs.[30] Though Hume can not extricate himself from the dialectic which, after ridding him not only of Locke's material substance but also of Berkeley's spiritual substance, also seems to deprive him of an external world and thus to reduce him to a verbal confusion, yet none the less he will refuse to take that position. For scepticism is the most sceptical position of all,[31] that is, it is the position which produces the least conviction. Even where he can not reason his way out, he regards it as false the minute he leaves the universe of discourse in terms of which the problem is set and finds that he is not living in that kind of a universe after all.

The oft-quoted remark which Hume makes about back-

28 IV, 127, note.
29 IV, 130.
30 I, 474-5.
31 IV, 129.

gammon [32] is improperly interpreted when it is taken to mean that he believed a conclusion when philosophizing which he could not believe when entering into social life. He was perfectly willing to take seriously a philosophy which he found by experience to be true. But he was not willing to take seriously a philosophy which he found to be false, even though he could not refute it. Backgammon is not a mere pastime in which he was enabled to forget the unpleasant outcome of true thinking; rather it is itself a certain fresh contact with reality which proves that the thinking through which he had gone on the Lockian basis had arrived at a futile conclusion. Hume is a sceptic only in so far as he continues to play with a dialectic which he can not solve; but he is not a sceptic in the sense that he doubts the existence of the dinner he eats, the game he plays, and the friends with whom he passes a merry evening.

This interpretation of Hume's scepticism will become clearer when the more constructive suggestions of the *Treatise* and *Enquiry* are reviewed in the next section.

II

If Hume had done nothing more than to manipulate the premises of the Lockian epistemological position and to reveal its implicit logic, he would have been an important historical figure. But it is doubtful if he should in that case be called a great philosopher. Fortunately for his reputation he contributed a constructive doctrine as well as a destructive criticism. This constructive doctrine is never cleared of traces, sometimes very damaging traces, of the epistemological tradition. But it is perhaps worth while first to state the constructive teachings clearly and

[32] I, 548.

then afterwards to show the irresolution with which Hume expresses them; for certainly both the major part of Book I of the *Treatise* and the bulk of the *Enquiry* proceed on principles opposed to that epistemological dialectic already discussed.

Hume is above everything else an empiricist. He is not concerned to prove by argument what kind of a world we are in; rather he is ready to accept whatever he finds as real and to accept nothing else. "Upon opening my eyes and turning them to the surrounding objects, I perceive many visible bodies." [33] These bodies do not need to be proved real: they are that by which any other objects would have to be proved real and any ideas proved true. Experience is "our only guide in reasoning concerning matters of fact." [34] The ultimate court of appeal is always for any one "the immediate objects of his senses." [35] Even when as philosophers we examine what there is about human nature which leads us to regard experience as authoritative, we do not question that experience *is* authoritative. "None but a fool or madman will ever pretend to dispute the authority of experience." [36] True it is that the senses "give us disproportioned images of things;" [37] but it is by further sense-experience that we learn of and correct such errors.[38] Hume refers with equal readiness to nature, matter, and objects as the evidence upon which our theories must be based. We may legitimately ask why it is we believe in the existence of body, but not whether there be such a thing as body. For the existence of body "is a point which we must take for granted in all our reason-

[33] I, 340.
[34] IV, 89.
[35] IV, 88.
[36] IV, 32.
[37] I, 336.
[38] IV, 124.

ings.''[39] And the reason we must take it for granted is that it is given us in experience. We do not create the subject-matter of philosophy: we discover it and then tell what we have discovered.

Hume is constantly calling objects by the name of perceptions. Not simply in the epistemological passages quoted above, but also in the most empirical passages, the two terms *objects* and *perceptions* are treated as equivalent. ''We have no perfect idea of any thing but of a perception.''[40] But Hume does not mean to prejudice the nature of the real by the terms which he uses in referring to it. The objects to which we must appeal are of course the objects we perceive and no others. But by whatever name they are called, they are just what we find them to be. Even when we consider their existence apart from experience, there is no difficulty concerning their nature, but only concerning their relations and situation.[41] Hume confesses to inventing the term *impression,* since he found no term current which would indicate just what he wished to mean;[42] but the meaning of the term must in that case be taken from the nature of the objects to which it is applied, and the objects remain of the same nature as they were before the term was applied to them. Similarly when the objects of experience are named ''perceptions,'' we must consider perceptions to be whatever we find the objects to be, and must not attempt to settle the status of those objects by supposing them to be what might likewise be named perceptions in another connection and in another sense of the word.

Hume points out several significant things which we discover when we go to the perceived objects to determine the

39 I, 478.
40 I, 518.
41 I, 480.
42 IV, 13-4.

nature of the world we are in. One significant thing is that "everything in nature is individual." [43] We never find anything except particular things. Just as there are no eternal and immutable relations discoverable between things, so there are discoverable no abstract essences or universal beings. Even abstract or general ideas are at least particular from the point of view of their existence in the mind of some person; that is, they are found to be upon close examination particular images which have an extensive signification and represent a number of different objects.[44] Still more is it true that every object we know anything about is "determin'd in its degrees both of quantity and quality." [45] However confused and vague an object may be, its apparent lack of definiteness is due only to the faintness or unsteadiness with which we perceive it, and not to its being of no particular degree or proportion. Nature is composed throughout of individuals. Moreover, these individuals are all compatible and form an aggregate of harmonious existences. "The appearances of objects to our senses are all consistent." [46] We can even call the perceived objects substances, if we wish, not of course in the Lockian sense of the word, but in the sense that these objects are in need of no explanation or demonstration in order to exist in their own right. When by substance we mean "something which may exist by itself," [47] we can not but conclude that "every perception is

43 I, 327.

44 I, 325. Cf. also I, 327-8, 330, 341. Nowhere is Hume more inadequate than in his analysis of abstract ideas. What he says is true enough as far as it goes, but it does not point out the important things. His treatment results in interpreting ideas as just so much imaginal stuff, and the reference of thought is overlooked. The only extenuation which could be pleaded is that the whole British tradition has erred in this matter, usually more flagrantly than Hume.

45 I, 327.

46 I, 368, note.

47 I, 517.

a substance."[48] In other words, the world we live in is exactly that world which we find about us in experience, and we can not legitimately demand anything more ultimate or final.

A second significant point is that we can find no reason for the world being what it is instead of something entirely different. We are entitled to ask why some particular thing exists, but not why things in bulk are what they are. The statement that matters of fact "are evidently incapable of demonstration" means two things: both that they need no demonstration in order to be accepted as real, and also that they might have been, even if they are not, altogether other than they are. "Whatever *is* may *not be*. No negation of a fact can involve a contradiction."[49] Indeed we may go so far as safely to affirm that "*nothing we imagine is absolutely impossible.*"[50] For anything which we can conceive is entirely possible. Yet it must not be doubted, just because things might be different, that they are not exactly what they are found to be. Hume never confuses mere possibilities with actualities.

A third important observation which Hume gives us is that all events are "loose and separate," "*conjoined*, but never *connected.*"[51] So far as we can discover there are no necessary bonds between the objects of our experience, but rather any of them "may exist separately without any contradiction or absurdity."[52] Hume regards it as an established maxim of metaphysics that "everything that is different is distinguishable: and everything that is distinguishable may be separated."[53] That is, not simply each

48 I, 527.
49 IV, 134.
50 I, 339.
51 IV, 61.
52 I, 558.
53 I, 343. Cf. also I, 319, 326, 335, 339, etc.

existence might be other than it is, but also each relation between existences might very well be different. This position, however, like the preceding one, must not be misinterpreted. Hume did not doubt that existing relations are what they are, but he only maintained that the existing relations chanced to be the actual ones from among an enormous number of equally possible ones.

This last observation, it may be objected, conflicts with Hume's explicit statement that "the understanding never observes any real connexion among objects."[54] The conflict is but one of language, however, as becomes clear if we inquire into the meaning of Hume's terminology. A sample passage which may serve to throw light on other kindred phrases is this one: "Nothing is more evident than that the human mind cannot form such an idea of two objects, as to conceive any connexion betwixt them, or comprehend distinctly that power or efficacy by which they are united. Such a connexion wou'd amount to a demonstration and wou'd imply the absolute impossibility for the one object not to follow, or to be conceiv'd not to follow upon the other: which kind of connexion has already been rejected in all cases."[55] As the last phrase of this quotation shows, it is not all connections, but a certain kind of connection, which Hume is repudiating. The particular kind repudiated is indicated when it is said that they are such connections between objects as could be conceived not to follow. That is, the connections between objects are not akin to that which compels us to pass from the premises to conclusion in syllogistic reasoning. They are not *a priori*. We never find, as Hume puts it in another passage, "any real, intelligible connexion."[56] Effects can not prop-

[54] I, 540.
[55] I, 456-7.
[56] I, 462.

erly be considered as "an infallible consequence" of causes.[57] Certainly Hume can not mean what the words have indicated to most of his critics; for in addition to saying "we never can observe any tie between" objects,[58] he also speaks of the "experienc'd union" of causes and effects.[59]

Hume's meaning becomes clear only when he is considered in his historical situation. Under the influence of the beginnings of modern science, the world had come to be regarded as a vast mechanism, organically and logically bound together part with part, governed by mathematically necessary laws of a deductive character. Absolute space and absolute time, matter and motion, and eternal laws enabled perfect prediction in advance of occurrence. Newton, perhaps more than any one man, is responsible for the widespread acceptance of this view of the world. But philosophers had taken it up as well as scientists. Even before Newton's time, Descartes had made mathematics the foundation of our knowledge of material substance, and had banished from the external world all properties which could not be stated mathematically. Optics, a favorite study of the period between Descartes and Hume, was popular largely because of the possibility of mathematical procedure. Leibnitz developed further the deductive technique. Spinoza endeavored to extend to morals this method which had been so successful in other lines (*Ethica ordine geometrico demonstrata*). Even Locke, in spite of his own frank limitation of the extent of human knowledge, wrote: "I doubt not but if we could discover the figure, size, texture, and motion of the minute constituent parts of any two bodies, we should know without trial several of their operations one upon another, as we do now the properties

57 IV, 54.
58 IV, 61.
59 I, 460.

of a square or a triangle.'' [60] The two important phrases in this statement by Locke are *without trial* and *as we do now the properties of* geometrical figures. More and more the view had become current that any knowledge worthy of the name must be deductive, mathematically and logically necessary, *a priori.*

Hardly a voice had been raised against this view except that of Berkeley, and Berkeley's theological interests had prevented his being taken seriously by the scientific world. Hume now adopted Berkeley's idea, separated it from theological coloring and endeavored to drive it home with greater force. ''No object ever discovers, by the qualities which appear to the senses, either the causes which produced it, or the effects which will arise from it; nor can our reason, unassisted by experience, ever draw any inference concerning real existence and matter of fact.'' Or again: ''Nor does any man imagine that the explosion of gunpowder or the attraction of a loadstone could ever be discovered by arguments *a priori.*'' [61] Or once more: ''The understanding, when it acts alone, and according to its most general principles, entirely subverts itself, and leaves not the lowest degree of evidence in any proposition, either in philosophy or common life.'' [62] *Real* connections mean to Hume connections which accord with the commonly accepted principles of the science of his day; they are ''intelligible'' or rational, deductive, and such that their opposite can not be even conceived. Necessity, in the sense in which Hume denied it, is logical necessity.[63]

60 *Essay concerning the human understanding*, Book IV, chapter III, § 25.
61 IV, 25.
62 I, 547.
63 A beautiful instance of complete misunderstanding of Hume on this point is William James's treatment of Hume's doctrine. Cf. *The principles of psychology*, I, 254-5; *Essays in radical empiricism*, 42-4; *Some problems of philosophy*, 196-201. James like Hume rejects rationalistic interpretations of the external world and refuses to grant that the connections between things are "necessary." The type of connection to which he points would not only

In denying the existence of "real connections" in that sense, (a sense which was probably more intelligible to his contemporaries than to most people to-day), Hume did not deny that there *really are* connections and relations between objects which it is the business of science and philosophy to discover. Experience "assures us of the laws of nature."[64] And though we establish those laws through experience, we none the less reason "justly and naturally."[65] Perhaps the distinction between deductive and inductive procedure comes out more clearly in the *Enquiry* than in the *Treatise*, because of the distinction in the former of those works between "relations of ideas and matters of fact."[66] But the same distinction in other words is to be found in the *Treatise*. Hume speaks of and accepts Locke's distinction between knowledge and probability, with, however, a modification which makes the causal connections discovered in experience more than mere probability. Human reasonings are of three sorts: knowledge, proofs, and probabilities. The first, as Locke and Hume agree, arises solely from the comparison of ideas, and does not go beyond the discovery of certain relations between those ideas.[67] The second comprises many of our arguments based upon our discovery of the laws of cause and

be granted but insisted upon by Hume, i.e. the relations represented by such words as *in, on, of, with, but, and, if,* etc.

64 IV, 105.

65 I, 511.

66 IV, 20.

67 I, 373. It should be noticed here that Hume never takes into consideration a certain important problem which arises in this connection. Why is it that we do and can apply the knowledge of ideas to the real world of physical fact? Not simply do we discover the relations between the ideas, but we know them to be the relations between the things which are indicated by the ideas. This problem is real for the empiricist as much as for any one, and its solution would reveal a great deal about our world. It is a problem of both logical and metaphysical import, and might well be called an epistemological problem. But, as was said in Note 1 of this paper, the term epistemology is used in this paper exclusively for the problem of how we know a world which has first been defined so as to be unknowable.

effect, and is "entirely free from doubt and uncertainty." [68] Probability includes the arguments of an uncertain or tentative nature. What more evidence could be demanded of the fact that Hume accepted the reality of the discovered connections between objects just as much as he accepted the reality of the discovered objects? Surely it is futile to quarrel over words, and to insist on misinterpreting an author whose language does not at all times resemble our own.[69]

In conclusion of this section, it must be repeated that the empirical philosophy above outlined, though it appears throughout Hume's writings, is never presented clearly or without mixture with the other epistemological philosophy. None the less, it can be said that Hume often accepts the evidence of the senses at face value as putting us in touch with reality, that he regards this evidence as a subject-matter to be worked with but not to be accounted

68 I, 423.

69 It would be relevant to note in this connection Hume's consideration of chance in the *Enquiry*. For he there affirms quite explicitly that there is "no such thing as *Chance* in the world." IV, 47. Or again: "Nothing exists without a cause of its existence." IV, 78. The *Treatise* contains no clear enunciation on chance, though the section on the probability of causes speaks of the fact that a conclusion can sometimes be established "on one single experiment," evidently implying the uniform operation of causes. I, 429. Surely there is no contradiction between belief in the universal presence of causes and the denial of logical necessity in nature. Yet critics have often claimed that the *Enquiry* was a retraction by Hume of his real views, so that I have been endeavoring to use it only to reinforce what is quoted from the *Treatise*. Personally I can not agree with such a view of the *Enquiry*, though I have not wished to take occasion to discuss the matter in this paper. I might just say briefly here that the *Enquiry* seems to me to take the epistemological point of view less seriously and less persistently, even though it makes no material change in the positions indicated in the *Treatise*. That is, though Hume still had no solution to the sceptical outcome of the academic puzzle inherited from Locke, he was less interested in playing with dialectic and less concerned with his inability to find his way out from it. He gives us in the *Enquiry* a less mitigated empiricism. Yet the differences are slight, and I am in full accord with the generally accepted judgment that the *Treatise* remains by far the more searching and the more profound of the two works.

for, that he does not prejudice his subject-matter by calling it perceptions of the mind, that nature consists solely of individual or particular objects, that these objects are logically distinct from each other, and that both their existence and their connections are problematic in advance of experience. That Hume did not develop this empirical philosophy and straighten out the opposition between it and the epistemological philosophy, is due probably, not simply to the long months of study which he gave to Locke and Berkeley during the formative years of his life, but also to his largely negative interest in empiricism. For Hume's empiricism was more a method of attack upon the Newtonian world and a critique of current theological views than a constructive doctrine. In spite of giving many constructive suggestions, he was not primarily concerned with establishing an interpretation of the world. He was more interested in commenting upon the method employed by others than in giving a system of philosophy. Hume was controlled by his animus against current errors rather than by a desire to build up a fresh structure.

III

The epistemological and empirical strains in Hume's writings were never brought into harmony, but often led to inconsistent utterances upon important points of philosophical theory. Hume's readers have nearly always read an epistemological meaning into the most empirical passages. It seems worth while, therefore, to comment upon certain expressions used by Hume, particularly in connection with the two doctrines of an external world and of causation.

The denial of the existence of "external objects" has two different meanings in Hume. On the one hand, it means that we have no reason to believe in objects apart

from the consciousness of the individual. Neither the senses nor the reason can establish the reality of objects "distinct from the mind and perception" and continuing in existence whether perceived or not.[70] On the other hand, the denial of external objects means only the commonsense insistence that we have no warrant for believing in a different order and realm of being than that found in experience. The most casual reading of the *Treatise* shows a constant supposition of objects real apart from being perceived, of nature as an objective environment in which man has to operate, of material things as more permanent than our perceptions of them. Hume's critics have usually supposed that the denial of external objects was inconsistent with this realistic supposition; and they have often regarded the references to other than perceived objects as a mere manner of speech which Hume did not mean to have taken seriously. But in this second sense in which external objects are denied, there is no shadow of inconsistency with the affirmation of an independently real world. Hume denies only such external objects as the meaningless substances postulated by Locke as causes of the objects experienced, showing once more his agreement with the Berkeleyan criticism of Locke. The only objects we know anything about are those perceived. There may be others, but we have no ideas about them, and waste our time in arguing concerning them. We can not deny the possibility of their existence; but we can deny the possibility of knowledge of their existence. We can not affirm the existence of an order of beings different than those experienced; for "we can never have reason to believe that any object exists of which we cannot form an idea."[71] We can not hope even to imagine another order of beings; for it is "impossible for us so much as to conceive or form an idea of

70 I, 479.
71 I, 466.

anything specifically different from ideas and impressions.''[72] We can well attribute to objects different relations and durations than those in which we now perceive them to stand; but we must suppose them to be the same sort of objects still. Proof of a different sort of object is impossible from the nature of the case; for all proof as to matters of fact rests upon experience, and in experience all objects are of course those perceived. Neither of these two meanings of the term ''external objects'' is consistently maintained; but the second meaning which fits in with Hume's empiricism is at least as important a part of his thought as the epistemological meaning of the same term.

Likewise there is variation in meaning for the expressions in which Hume contrasts ''*the appearances* of objects to our senses'' with ''their real nature.''[73] On the one hand, Hume speaks of appearance and reality as a contrast between what is in the mind and what is the outside and independent cause of the mental state. The references to ''secret powers'' and ''secret natures'' in the *Enquiry*[74] usually incline to this interpretation. The causes and natures are secret just because they do not belong to the order of impressions and ideas but to the external world which is forever unknown. And in the *Treatise* Hume asserts even more plainly that he will make no attempt to account for the real nature and operations of objects but only for the manner in which objects affect the senses, on the ground that the former attempt would be ''beyond the reach of human understanding.''[75] On the other hand, Hume gives

72 I, 371.

73 I, 368, note.

74 IV, 33, 36, 37. Such an epistemological interpretation is less implied by the statement that "the contrariety of events may not proceed from any contingency in the cause, but from the secret operation of contrary causes." IV, 71.

75 I, 367.

an entirely different meaning to the contrast between appearance and reality. By appearance he designates "the more obvious properties of external objects,"[76] and by reality he recognizes the fact that "there may be several qualities both in material and immaterial objects with which we are utterly unacquainted."[77] That is, the contrast between appearance and reality is a matter of the incomplete disclosure of the nature of an object and the full nature which the object has. It is a matter of the less and the more within the same realm of realities. Even though we do not know everything there is to know about any one object, our knowledge is satisfactory as far as it goes; for what we perceive is really "the qualities of the objects"[78] or "those external properties which discover themselves to the senses."[79] Just as we can not prove that objects which we have not experienced must resemble those of which we have had experience,[80] so we can not go from a limited experience of an object to an inference as to its total nature. "We cannot form to ourselves a just idea of the taste of a pineapple, without having actually tasted it."[81] That is, we can not tell from looking at a pineapple what it tastes and smells and feels like. We can get beyond the present data of sense only by arguments from cause and effect; and such arguments must be based upon experience only and can never advance where experience has not already gone.[82] Thus the contrast between appear-

76 IV, 85.
77 I, 462.
78 I, 372.
79 I, 367.
80 I, 392.
81 I, 315.
82 I, 377, 388; IV, 24. Cf. IV, 67: "It seems evident that, if all the scenes of nature were continually shifted in such a manner that no two events bore any resemblance to each other, but every object was entirely new without any similitude to whatever had been seen before, we should never in that case have attained the least idea of necessity, or of a connexion among these

ance and reality, like the denial of external objects, has two meanings, and is consistent with Hume's empiricism as well as with his epistemological point of view.

Hume's analysis of the idea of causation is, more consistently than any other part of his work, based upon empirical assumptions; but it has been supposed by most of Hume's critics that Hume made causation a non-physical and purely psychological affair. There is not always an epistemological dualism lurking in his statements that "we cannot go beyond experience."[83] Often there is only the empirical honesty which recognizes that we can not infer "the nature and qualities of objects" from one another, but must come into direct contact with all the objects by means of perception.[84] "There is no single phaenomenon, even the most simple, which can be accounted for from the qualities of the objects, as they appear to us, or which we cou'd foresee without the help of our memory and experience."[85] Or, as he puts the same point in another place: "*Causes and effects are discoverable, not by reason, but by experience.*"[86] Just as we can not infer the coexistence of qualities in the same object in advance of experience, so we can not determine apart from experience the causal relations of contiguity, succession, and constant conjunction. Hume treats cause and effect as a discovered fact of experience, which he emphatically differentiates from the "necessary" relationships of certain ideas. So far as we can determine, the world is arbitrarily arranged, not as a system of logical entities, but as a collection of things and laws which might well be otherwise than they are. It is from the point of view of a formal logician, not from the

objects." Yet even here, Hume does not deny that there might be undiscovered causes and effects.

83 I, 308.
84 I, 509.
85 I, 372.
86 IV, 25.

point of view of an investigator of physical nature, that Hume asserts that "any thing may produce any thing." [87] For as he elsewhere explains: "For ought we can determine by the mere ideas, any thing may be the cause or effect of any thing." [88] We soon discover in manipulating natural forces that they are just what they are, and not otherwise; but as reflective thinkers we can picture other worlds as possible, and so we conclude that as regards our particular world "there is no foundation for any conclusion *a priori*." [89] Considered from the point of view of its own qualities, an object might be followed by any effect whatever; only considered as the kind of thing we have handled before, is it probable evidence of a predictable outcome. In other words, the laws of nature which we formulate in terms of causation tell us what things we have in our world and how they behave, but not why they are nor what determined them to be as they are.[90]

The reason why Hume's doctrine of causation has been given a psychological interpretation is probably to be found in the language with which he discusses the idea of necessity. "Necessity . . . is nothing but an internal impression of the mind. . . . Necessity is something that exists in the mind, not in objects. . . . The efficacy or energy of causes . . . belongs entirely to the soul." [91] Such passages, coupled with the misunderstanding of Hume's denial of "real connexions," have led to the supposition that Hume regarded causation as a mere habit of mind without justification in nature. That this supposition is incorrect becomes evident if one considers what Hume is aiming at in his section on "the idea of necessary connexion."

87 I, 466.
88 I, 532.
89 I, 531-532.
90 IV, 27.
91 I, 459-460.

In addition to denying that nature is a logical system of entities, Hume is eager to attack the position that all causal sequences are evidences for the activity of the divine will. The investigations of nature in the eighteenth century had often been based on the assumption that causality and will were equivalent. Even if "the efficacy of second causes" was maintained, the source of this efficacy was regarded as supernatural; and often, as in the case of "the *Cartesians* in particular," the fact of natural causes was denied and all events were directly attributed "to a supreme spirit or deity . . . as the only active being in the universe, and as the immediate cause of every alteration in matter." [92] It was Hume's method of attack, in this case as so often elsewhere, to inquire whence the idea of necessity was obtained. Necessity was synonymous with power, force, efficacy, agency, etc.;[93] and the whole edifice of rationalistic supernaturalism rested upon this idea. As opposed to the rationalists, Hume wishes to point out that the idea of necessity has an empirical origin, and that this empirical origin is not any object or conjunction of objects, but a habit of mind due to the frequent repetition of certain sequences in our experience. Then it is possible to conclude that this idea of necessity is of no use in the interpretation of nature, and can not be legitimately employed to build up a metaphysics of divine creation and providence. The idea is not a clue to the proper understanding of nature. As soon as we try to view nature as governed by necessity, we are "led astray by a false philosophy." [94]

It is important to emphasize the fact that in denying necessity or power to nature, Hume did not deny the regularity of coexistence and sequence in nature; that is, he did not deny that correlation of various factors, which,

92 I, 453-455.
93 I, 451.
94 I, 462.

increasingly since his day, has become the accredited scientific conception of causality. The point of Hume's treatment of the idea of necessary connection is that we have no warrant for interpreting nature after a propensity, habit, or custom of our own. Habit is but one among many facts which we discover. It is not a key to other facts. We do not know why the mind is governed by habits. "The uniting principle among our internal perceptions is as unintelligible as that among external objects, and is not known to us any other way than by experience." [95] Like the association of ideas, habit is to be resolved into the "original qualities of human nature, which I pretend not to explain." [96] From habit we can make no legitimate inferences about objects. It is the function of a philosopher to show what effects flow from habit but not to inquire into its causes. Human nature might have been differently constructed; but it is the part of wisdom to realize that it is as it is, and that it then eventuates in certain consequences. Hence this criticism of human nature as the source of the idea of necessity, so far from involving a rejection of natural causation, is meant by Hume as a support therefor. It was those who treated causality as a necessary power who then went on to deny all causes except the divine will. If necessity is seen to be a matter of human propensity, there is no basis for super-naturalism, and the facts of contiguity, succession, and constant conjunction remain exactly what they are discovered in experience to be. The thorough empiricism of Hume is unmistakable in the sections on causation, and the epistemological and sceptical considerations seem to be entirely forgotten. "As to what may be said, that the operations of nature are independent of our thought and reasoning, I allow it; and accordingly have observ'd, that objects bear to each other the relations

[95] I, 463.
[96] I, 321.

of contiguity and succession; that like objects may be observ'd in several instances to have like relations; and that all this is independent of, and antecedent to the operations of the understanding.'' [97]

IV

Hume gives his *Treatise* the sub-title: ''Being an attempt to introduce the experimental method of reasoning into moral subjects.'' Two terms in that description of the task to which he set himself call for comment.

In the first place, the concern is with moral subjects. But moral subjects include far more than what we mean today by ethics. Moral subjects are those in which mathematical certainty is not possible. In the *Treatise* Hume includes mathematics, natural philosophy (physics), natural religion, as well as morals, aesthetics and politics.[98] In the *Enquiry* he excludes mathematics from the list, but makes no further change.[99] Even metaphysics is a moral subject.[100] For in all such sciences we can accomplish nothing by *a priori* considerations. There are, Hume tells us, all imaginable degrees of assurance in the various matters with which men are concerned, and these degrees run ''from the highest certainty to the lowest species of moral evidence.'' [101] That is, reasoning is of two sorts, demonstrative and moral, and as the editions of the *Enquiry* in 1748 and 1751 further explain, moral means probable.[102] ''Moral evidence'' [103] is evidence which establishes a pre-

97 I, 462-463.

98 I, 307.

99 Yet in one place Hume seems to classify physics with geometry among the demonstrative sciences. It is hard to conclude that this is other than a slip in writing or printing. It can hardly represent Hume's real opinion. IV, 51.

100 IV, 51. Of course Hume has no intent here of implying that we can draw ethical implications from our metaphysical conclusions.

101 IV, 89.

102 IV, 31.

103 IV, 74.

sumption. Moral subjects are those in which conclusions of an indubitable sort can not be hoped for, though we may nevertheless have arguments which "leave no room for doubt or opposition." [104] In matters of fact moral evidence is all we can secure: and so metaphysics as well as physics, aesthetics, or politics, since it deals with matters of fact, must be content with an empirical procedure. Of course metaphysicians have not been often content to pursue the only sound method; but when they try to proceed by "demonstrations," they only give us "abstract" theories and bring philosophy into disrepute.[105] Failure to renew the appeal to facts instead of reasoning from ideas is but a shelter for superstition, and destroys the possibility of making metaphysics a science.

In the second place, Hume announces his resolution to keep himself to the experimental method, or the method of appealing to perceived facts. And since he considered himself one of the first to apply this method widely, he intended to stress his method of procedure more than the conclusions to which it would lead. It is interesting to remember this point in reading the first book of the *Treatise*. Hume is inquiring, not so much whether there are existences beyond the present testimony of the senses, as how and why we can know that there are; and when he determines what we believe for a certain reason, he does not always mean to reject the beliefs so set up. We of course find that our rules for judging of cause and effect "are form'd on the nature of our understanding, and on our experience of its operations." [106] But we surely would not want rules whereby a different sort of being with a different sort of nature should proceed. We find also that imagination rather than reason is the basis of our beliefs

[104] IV, 47, note.
[105] IV, 5, 8, 13.
[106] I, 445. Cf. I, 473.

in some cases; but we are only fortunate, not handicapped, on that account, since reason is slow, is not present at all ages, and is extremely susceptible to error, whereas imagination is often controlled by our past experience of facts.[107] "Had ideas no more union in the fancy than objects seem to have to the understanding, we cou'd never draw any inference from causes to effects, nor repose belief in any matter of fact."[108] But since we find that the imagination is often suited to guide us in the world in which we find ourselves, we have in it a valuable tool. In other words, the discovery of the psychological mechanism of belief is not a repudiation of its validity on many points, but only a warning that its suggestions must be checked up by further observed facts.[109]

It must be at once added that Hume does not on these two points remain a consistent empiricist any more than he does on others. The scope of moral subjects shrinks to include merely the sciences of man's mental life, as soon as Hume becomes epistemological and is thus confined to a consideration of the impressions and ideas within the mind. That is, the sole knowledge possible turns out to be psychology. The experimental method also becomes merely a handling of mental facts, as it is supposed that no other facts are available to the philosopher. And the imagination is scorned as a delusive faculty which mistakes its subjective fictions for pictures of a realm beyond the mind which imagination can of course never attain.

Hume's fundamental error is his inability to distinguish two things which are separable, namely the two-fold ap-

107 IV, 47.

108 I, 393.

109 There is a problem here, similar to that mentioned in Note 67, which Hume did not attack. This problem might again be called epistemological, in a broader sense of that term than that given it in this paper. Why are the mental habits of human beings so well suited to guide them in knowing and in handling nature? The metaphysical and logical implications of a solution of this problem would be far-reaching.

proach to philosophical problems and the consequent twofold ambiguous use of certain terms. In many passages perception is for Hume only a methodological concept, and indicates that truth is to be obtained by such empiricism as Bacon had advocated.[110] In other passages perception is for him also an ontological concept, and indicates a kind of being which shuts man off not merely from knowledge of other kinds of being but even from the possibility of knowing whether there are other kinds. Similarly experience is at times a reminder that the human imagination must be disciplined by an appeal to concrete facts, and at other times a subject-matter which, for a philosopher interested in the world of nature, proves to be more of a curse than a blessing. On account of such ambiguities as these, Hume failed to form a consistent and adequate method or to procure a satisfactory view of the world and of man's life therein.

The dual approach to philosophical problems in Hume's writings is a natural consequence of his age. Modern philosophy had originally been most fundamentally concerned with method. Francis Bacon, Descartes, and Locke had sought the way to follow in the search for truth. Then because of certain assumptions of a psychological sort, present to a limited extent in Descartes and even more in Locke, there arose the metaphysical question of the existence of an independently external world. Hume shows these two interests in a confusion typical of the eighteenth century and his work has been very largely responsible for handing on the confusion to our own day.[111] For since

[110] Cf. the references in Hume to Bacon. IV, 107, 207.

[111] E.g., J. S. Mill, though realistic and empirical in the bulk of his *Logic*, becomes involved in epistemological difficulties in other works. William James and the Jamesian pragmatists constantly vacillate between a frank and naturalistic realism, and a curious subjectivism in which there is often no mind for mental states to exist in. The critical realists are the latest instance of the lamentable result of taking the empirical method as confining

Hume's day, empiricism which means a deference for facts has usually been uncertain whether there are any facts, other than one's own mental states, to defer to. The empiricist, when he becomes involved in epistemological subjectivism, is worse off than the rationalist; for he has no first principles by which to transcend the limitations of his own mind. He is like Moses standing on the mountain trying to peer into the Promised Land, forbidden to enter where he so longs to go; and like Moses he is often destined to an unknown grave outside the limits of the coveted realm.

V

The interpretation of Hume's writings which has been given above would change the customary classification of him and the customary position assigned to him in the history of philosophy. He can not be properly classified as either a subjectivist or a sceptic, though he is both at times and in part.[112] His place in the historical develop-

one to psychological states as the only immediate material present to the mind; and they would be forced, if they developed their method consistently, to repudiate metaphysics as impossible. Yet in spite of this historical situation, it may be doubted whether there is any logical connection between empiricism and epistemology.

112 Yet such an interpretation has been all but universal; it is the exclusive one suggested by T. H. Green, the best commentator on Hume's *Treatise*, by Thomas Huxley, the best enthusiastic advocate of Hume's work, and by W. R. Sorley, the best historian of English philosophy. E.g., Green speaks of Hume's scepticism as "a doctrine founded on the testimony of the senses, which ends by showing that the senses testify to nothing." (*General Introduction to Hume's Treatise*, § 154.) Again, Sorley asserts that Hume "will assume nothing about external reality," and supposes that Hume has nothing else to say than that "any assertion of a causal connection — the whole structure of natural science therefore — is simply a misinterpretation of certain mental processes." (*History of English Philosophy*, 172, 177.) Both of these critics regard Hume as building solely on the Lockian principle that we know but mental states. (Cf. Green, § 2, and Sorley, 172.) Then Huxley, working from this same assumption, practically turns Hume into a psychophysical parallelist! Probably such one-sided interpretations of a man whose thought contains quite other and much more important elements are due partly to the fact that these critics themselves accept the Lockian principle, and partly to the fact that they have not taken the trouble to examine the meaning which certain difficult terms had in Hume's own usage.

ment of modern thought can perhaps be best indicated in the light of the two fundamental axioms of the classical British tradition. Locke laid down the first axiom that the things we immediately perceive are ideas which exist only in the mind. Berkeley accepted this axiom, and added the second axiom that the things we immediately perceive are the real things.[113] Hume at times follows Berkeley in accepting both these axioms, though he shows clearly that he regards the outcome of this position to be false and unacceptable, even though he can not escape the dialectic of the position. But at other times he operates with only the second axiom, never, to be sure, explicitly rejecting or arguing against the first axiom, but nevertheless discussing the real world about us in terms which make the first axiom altogether irrelevant and ridiculous. For in so far as "perception" and "experience" are methodological and not ontological concepts, the procedure brings one in contact with realities which are given as both objective and real, and the question of the mental status of these realities would not arise at all.

This conclusion does not mean that the critics of Hume are not justified in calling him subjectivist and sceptic. For subjective and sceptical elements are clearly found in his thought, and come to the surface at frequent intervals throughout his writings. Certainly Hume deserves all the caustic reproaches of his critics when he says such things as the following: "This maxim is *that an object may exist and yet be no where*: and I assert that this is not only possible, but that the greatest part of beings do and must exist after this manner."[114] Such a statement would reduce Hume to a position akin to that of J. S. Mill in his attack on the philosophy of Sir William Hamilton, a position

[113] The language in which these two axioms are here stated is taken from the well-known passage near the close of Berkeley's *Third Dialogue between Hylas and Philonous*. Fraser's edition, I, 484.

[114] I, 520. Cf. I, 461.

which could well be summed up by saying that ideas are the function of body and there is no body. But such a position is taken by Hume only when in despair he sees through to the logical consequences of premises which he elsewhere does not use. The original in Hume, the profound and the significant, has seldom been grasped and has slightly influenced the history of modern thought. Kant's *Critique of pure reason*, in so far as it is taken as an answer to Hume, is irrelevant to anything except that side of Hume which was based on the Lockian axiom; and Reid's attempt to refute the Humian scepticism was less penetrating than the part of Hume's work which Reid altogether failed to take into account. The empirical tradition in philosophy since Hume and down to the present time continued almost exclusively to exercise its wits on the dialectic which Hume formulated on the Lockian basis Empiricism has been so largely tied up with a subjective epistemology that realism, where advocated at all, has been a venture of faith. Realistic philosophy has at times exhibited great cleverness in finding ways of circumventing Hume's scepticism, though accepting the postulates which made a passage from subjective mental contents to an external world a dubious procedure. Seldom have philosophers been aware that a wholly different approach to a realistic analysis of experience, not to be sure, presented with clarity nor developed with confidence, was none the less first announced to modern times in the pages of Hume's *Treatise.*

A NOTE ON THE INTERPRETATION OF GERMAN IDEALISM

Horace L. Friess

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An intelligent reader requires no training in history or metaphysics to recognize that Fichte and Schelling, Schleiermacher, Hegel, and Schopenhauer belong to the same philosophical family. For he can observe that they are united in language, not merely as members of the same nation, but also in a closer way as are the members of a single household, where a common inheritance, common impressions, and constant interchange with one another combine to develop a characteristic conversation. These men are the authors of a definite *genre* in philosophical literature. But though a layman will recognize the kinship of these writers, noticing similarities in the content and form of their works, it is a far different matter, and difficult even for the expert, to find epithets appropriately describing the common features of this group. "*Idealism,*" says Windelband, "is the common character,"[1] and this is the epithet generally selected. There is no need to quarrel with this well-established term; the only need is to understand it. For the more exactly we acquaint ourselves with these philosophers, the more perplexed we become as to the meaning of *idealism.*[2]

This perplexity does not arise merely because the same term is applied to thinkers who differ radically on many

1 Windelband, W., *A history of philosophy*, p. 569.

2 The subject-matter of this paper is the philosophizing of a certain group of men, and the term *idealism* is used as a blanket-term to cover that subject-matter, rather than with reference to a particular doctrine.

crucial points. Each of these philosophers, taken separately, is difficult to understand, so that if they were all alike, our problem would be simplified, but not solved. It is not easy to define the purpose or the real achievement in the speculations of any one of them. What relation is there between the experience of these idealist philosophers and the transcendental ideas discussed in their systems? Do these ideas function like scientific concepts, like ideals of life, or how? This is the fundamental problem stated in its most general terms.

We may catch the sense of this problem from Fichte and from the language, for example, with which he introduces his lectures on the *Characteristics of the Present Age.*

> Ein philosophisches Gemälde des gegenwärtigen Zeitalters ist es, was diese Vorträge versprechen. Philosophisch aber kann nur diejenige Ansicht genannt werden, welche ein vorliegendes Mannigfaltiges der Erfahrung auf die Einheit des Einen gemeinschaftlichen Prinzips zurückführt, und wiederum aus dieser Einheit jedes Mannigfaltige erschöpfend erklärt und ableitet. . . . Der Philosoph, der sich die Aufgabe einer solchen Beschreibung setzte, würde unabhängig von aller Erfahrung einen Begriff des Zeitalters, der als Begriff in gar keiner Erfahrung vorkommen kann, aufsuchen, und die Weisen, wie dieser Begriff in der Erfahrung eintritt, als die notwendigen Phänomene dieses Zeitalters darlegen; und er würde in dieser Darlegung die Phänomene begreiflich erschöpft, und sie in der Notwendigkeit ihres Zusammenhanges untereinander vermittelst ihres gemeinsamen Grundbegriffs abgeleitet haben.[3]

William Smith has translated this passage. I have tried it also, but would not attempt it again. For not only the terminology needs explanation; the thought itself is obscure. Does Fichte mean that we could predict every event of the age if we knew its "Begriff?" Or does he mean that we could predict only certain characteristics of the age, the kinds of phenomena it will exhibit, rather than the individual events themselves? Or does he mean something still

[3] Fichte, J. G., *Werke*, v. IV, p. 398 (Philosophische Bibliothek).

less definite, namely that this "Begriff" somehow illuminates and makes intelligible all the phenomena of the age? When we ask questions like these, it appears that the key words of the passage are slightly ambiguous. Several phrases seem to promise a scientific formula from which accurate deductions can be made, but taking the passage as a whole, we have no guarantee of anything more definite than a simultaneous discussion of certain historic events and a general idea in some way relevant to them. But how it is relevant remains to be discovered.

A similar obscurity characterizes the philosophizing of Fichte's idealistic contemporaries. Our quotation is not intended to focus attention upon him, but merely to illustrate concretely the sort of difficulty which causes us to believe that such philosophizing needs interpretation. To catch the significance of transcendental ideas is never easy; it requires an extensive familiarity with the background against which they are beheld, and also some acquaintance with the experience of beholding them. There is the danger of being transported into the belief that we are beholding God Himself, or, if we are naturalistically inclined, of thinking that we see nothing at all. But neither of these two attitudes is serious or refined enough to make a real understanding of *idealism* possible. By further concrete illustrations showing some of the most characteristic reactions of the idealistic philosophers to the whole setting in which their speculation developed, we may hope, if not to reach such an understanding, at least to suggest what it involves.

Some aspects of the setting in which the idealistic philosophies of Germany arose have been described frequently, especially the epistemological dilemmas and the religious problems. Sometimes Immanuel Kant has been singled out as the pivot around which everything turned, and a

familiarity with his thought regarded as sufficient preparation for the understanding of the philosophers who succeeded him. Did not he himself say that he would effect a Copernican revolution in philosophy? From Kant indeed the idealistic philosophers received a great suggestion, which crystalized their own dim suspicions, and showed them how to develop their inchoate thoughts. In order to understand these suspicions, however, and the original difficulties of the idealists (which were not the same as Kant's), we must refer not to Kant, but rather to a wider situation, on which he commented. We need to consider the general philosophic orientation of enlightened men in western Europe towards the middle of the 18th century. Though it is impossible to chart this completely, nevertheless certain important features must be mentioned.

The 18th century seems to have come nearer to the possession of an orthodox *Weltanschauung* than any other period since the distintegration of the mediaeval synthesis. The earliest critics of mediaeval philosophy differed widely in their own beliefs. But by 1750 considerable agreement appears to have been reached among educated people as to the character of the universe and man's estate therein. This new orthodoxy derived its chief inspiration from the progressive discoveries in the natural sciences. An old print showing Sir Isaac Newton refulgent amid his planets bears this legend:

> See the great Newton, He who first surveyed
> The plan, by which the Universe was made.

And not only the plan by which the universe was made, but also the ends for which it was intended were becoming known. For by applying the methods of physical science to psychology and morals, to politics and economics, the laws of human nature and of happiness could be discovered. Descartes' advice "never to form a judgment on anything

without having a clear and distinct understanding of it''[4] now appeared not only sound, but also easy to follow. And the German philosopher Mendelssohn describes the result in terms like these:

> After so many centuries of barbarism, in which human reason has had to bow before superstition and tyranny, philosophy at length sees better days. By means of a happy observation of Nature, all branches of human knowledge have made considerable progress. In this way we have even learnt to know our own souls better. Through a more exact observation of their actions and passions several data have been established, and from these it is possible, by means of an approved method, to draw correct conclusions. The leading truths of natural religion have, thanks to this improvement in philosophy, attained to a certainty which eclipses all the knowledge of the ancients.[5]

By less temperate spirits than Mendelssohn the approved methods of science, the canons of ''sound reason'' had been carried into every sphere, and the correct rules for cookery and dress, as well as for writing the best poetry were already published.

Although progress in the sciences was constantly accelerated, the optimism of the 18th century, its agreement and assurance in metaphysics and theology did not last. Hume and Kant are not alone responsible for this change. Their achievement was unique; they were able to explain why the methods of science did not suffice to solve certain ultimate problems, nor to establish theological dogmas. But more normal was the experience of many scientists who perceived this fact in the course of a day's work, without analyzing the concept of cause or propounding the antinomies of pure reason. And to the experience of these scientists must be added that of poets like Goethe, who knew they could not write by Gottsched's rules, and that of

4 Descartes, R., *Meditations*, IV, p. 178 (Haldane and Ross edition, v. 1.)

5 Mendelssohn, M., *Phädon* (postscript), quoted by Höffding in his *History of Philosophy*, v. II, p. 14.

men like Fichte, who found it impossible to discover the vocation of man (or their own vocations in particular) by any moral calculus whether using Lutheran or Wolffian formulas. Thus, moral standards, the rules for writing poetry, and the plan by which the universe was made were all in doubt. Yet astronomic knowledge had increased, extensive social and political reforms were begun, and better poems written than any ever made in Germany before. Such a situation naturally invited fresh philosophizing.

The idealistic philosophies did make a fresh beginning; they possess a radical novelty.[6] In them man surveys the universe anew, though not in the Newtonian fashion. Contemplating his attempt to find the plan by which the universe was made, his quest for moral standards, his poetic frenzies, he delineates the realm disclosed in these experiences. This realm becomes his universe, an incommensurable, absolutely spiritual domain, which human purposes rather than astronomic principles must render intelligible.

Such a revolution in philosophy is natural in a revolutionary time, when ultimate finalities are questioned. The individual is excited by his experience; he is thrown upon his own resources, and examines his own breast.[7] But in order really to understand the philosophic situation, when the 18th century heavens fell, we need a concrete illustration. And a very instructive one is furnished by the career of that eccentric "wizard of the north,"[8] Johann

6 Not only because of Kant, in my opinion.

7 Fichte's summons to introspection: "Attend to thyself; turn thy glance from all that surrounds thee and upon thine own innermost self. Such is the first demand which philosophy makes of its disciples." — This must be considered in the light of the whole situation as well as in Kant's light. (See Fichte, J. G. *First Introduction into the Science of Knowledge*, tr. by Benj. Rand in *Modern Classical Philosophers*, p. 486.)

8 The epithet *Magus im Norden* appeared on the title-page of one of Hamann's essays in 1772, and stuck to him. (See Hamann, J. G., *Schriften*, v. 4, p. 37. Published by G. Reimer.) Only certain features of this *Magus im Norden* can be glimpsed from the quotations in this paper, not his entire

Georg Hamann (1730-1788). For this man's writings record a lively personal experience of deficiencies in the prevailing popular philosophy. His reaction against the rationalistic enlightenment was original and unique, being derived neither from the pietistic tradition in Germany, nor from the French romanticism of Rousseau, nor from the criticism of Kant. Hamann was independent of Kant, but he had not the same persevering genius for metaphysical construction. He did not contemplate so long the ultimate predicament of reason (though he saw it), but devoted himself rather to exposing the evil consequences of unsound metaphysics upon the treatment of specific subjects. Most of his writings are brief polemics directed against contemporary publications; many are articles for periodicals upon controversies of the moment. They cover a great variety of subjects in philosophy, in theology, and especially in that field known as "criticism," which he describes as including "antiquities, literary criticism, the so-called fine and genteel sciences, poetry, novels, philology, and the French authors with their talent for portraiture and other imaginative delights." [9] Through all these fields he followed the serpentine trail of the orthodox philosophy, tilting, for example, with Diderot and Mendelssohn, but more frequently still with specialists like Damm and Starch,[10] whom he considered to be misguided by false metaphysical ideas. Thus Hamann's work carries us well into the texture of common thought from 1750 to 1780, and

nature. The rest of him, however, would not destroy, but amplify my argument. If there were compass enough to describe his religious ardor, his mystical leanings, his passionate libertarianism, and the persuasive eloquence of his weird, fantastic metaphors (all of which he combined with critical keeness and a "ticklish satirical humor"), we should see the actual ferment of that philosophic revolution which is usually attributed too exclusively to Kant's dispassionate, reflective criticism of metaphysics.

9 *Schriften*, v. 1, p. 171.

10 C. T. Damm, philologist and naturalistic theolog, see *Schriften*, v. 4, pp. 115 ff. J. A. Starch, a court-preacher, see *Schriften*, v. 4, pp. 233 ff.

surrounds us with the atmosphere in which the romantic idealism of Germany was born.

The perplexities which troubled him in his youth are a characteristic element of that atmosphere. In his case, however, they were unusually tenacious, leading finally in his twenty-eight years, after a long period of mental depression, to a serious crisis. His early education, he says, "beclouded in him every guiding concept," [11] and he did not succeed in finding a satisfying vocation. The piety of his home, and his training along traditional lines in the classics and in mathematics, might have turned him to preaching, but scientific studies at the University of Königsberg made him hesitate. For several years he took refuge in the pleasant futility of tutoring a young nobleman. Then, he ventured into business, having noticed that:

> Commerce is taken more seriously by our age than learning. . . . And school-dust had become distasteful to me; I wanted to adapt myself to the practical tendencies of the time, to commerce, to economics and political matters. These sciences pleased me because of their novelty and influence on human life. I was more inclined to these than to metaphysics or to imaginative systems.[12]

But he had no more confidence in his ability to succeed in business than in scholarship or in the ministry, so that even on his commercial travels he continued to be in doubt "whether to inquire after the state of business or of science." [13]

Not one of the idealists, whom we are considering, except possibly Schopenhauer, escaped vacillations of this kind. And in Schopenhauer's case his parents raised the vocational problem by opposing his own consistent desire to study. German society was undergoing a rapid material

[11] *Schriften*, v. 1, p. 157.
[12] *Schriften*, v. 1, pp. 185-186.
[13] *Schriften*, v. 1, pp. 195-196.

and spiritual transformation; the individual's activities were determined less completely and less automatically by traditional class distinctions and other accidents of birth than had formerly been the case, and new developments in every field, especially the commercial, presented the younger generation with a choice of vocations. But the educational system changed more slowly, and its ancient exercises did not prepare men for their new opportunities. That theme, the vocation of man, upon which the idealistic philosophers were so fond of writing, possessed a very literal and personal, as well as general and philosophic significance for most of them.

Hamann's reaction to this situation, the solution which he at length found for his perplexities, is also typical of romantic idealism in some respects. At least, his position helps us to understand much better the philosophers who succeeded him. He criticized the rationalistic system of metaphysics, and defended the Christian faith in its more traditional, Lutheran form. For during the crisis, to which his vacillations led him, the Bible made a great impression upon him, so that he began to understand it as a revelation. He found a striking parallel between the spiritual fluctuations of the Hebrew people and his own experience. Like them, he had been trying to "build a bridge to fortune,"[14] and ever murmuring against the spirit that controlled his life. He had expected unmistakable signs, pointing a way to his success, indicating to his reason an entire plan of life wherein his every action would receive a meaning and a value. But each alternative that his reason could discern had disadvantages, omitted something which he desired to preserve, and thus he had gradually become distracted, wholly paralyzed in will and action. The reasoning spirit in him seemed a very demon, *ein Geist*

[14] *Schriften*, v. 1, pp. 212 ff.

der stets verneint. — Now suddenly he recognized his error, his faithlessness, his lack of confidence in that part of the truth which he possessed. Now he realized that no man can survey the entire road to his salvation, that we can not demonstrate, yet must believe we travel on this road in following the actions to which we are persuaded, and which seem right to us. If inner peace and freedom are impossible until we have demonstrated that each action will be the most conducive to our total welfare, must we not remain forever in distraction? Is our total welfare at any time revealed? Is it not pieced together out of many parts whose bearings on each other we never see completely, and least of all prospectively? "We live upon crumbs. Our thoughts are nothing more than fragments. Yea, our knowledge is a patchwork." [15] Peace of mind and freedom for our work come only from a faith that our immediate opportunities have a meaning and a value no matter what events may follow in the future. Such faith now took possession of Hamann, so that the demon vanished, and he henceforth felt himself to be a god-inspired man. Previous to this experience, nothing seemed to him worth while; now he believed that everything had its significance, that "nothing is without value for our souls." [16]

In discovering the limitations of reason and the necessity of faith ultimately to justify his actions, Hamann believed himself to be turning back to Luther's teaching in the liberty of a Christian man. To an acquaintance who could not understand what had happened he sends these words of explanation; *ich lutherisire.*[17] But his position with regard to faith and reason connects him with the future, as well as with the past. Its close affinity to Fichte's doctrine, for example, can not escape observation. But still more strik-

15 *Schriften*, v. 1, p. 129.
16 *Schriften*, v. 5, p. 25.
17 *Schriften*, v. 1, p. 360.

ing is the agreement between his view of life and that which Goethe illustrated on such a large scale in his *Wilhelm Meister.*

"In the last analysis," says Goethe, "the burden of the whole work amounts to this, that man, despite all his folly and confusion, nevertheless, being led by a hidden hand, reaches a fortunate end." [18]

This is not alone the thought, but also the very language of Hamann.

He was, however, not a Goethe. In criticizing the claims of rationalistic metaphysics to have surveyed the whole realm of experience, he foresaw the possibilty of imaginative adventures such as Goethe consummated, but his own fancy made no extensive voyages in uncharted seas. His talent was essentially for criticsm, for drawing the nice line between products of enthusiasm and products of reflection. He had a keen scent for that joyous excitement which seduces us into expanding the significance of our happy thoughts beyond their legitimate reference. This weakness he pointed out in the 18th century philosophy of nature, in those who spoke as if nature were thoroughly understood by the physicist.

"It takes more than physics to decipher nature," he says. "Physics is nothing but the A B C. Nature is an equation of unknown degree, a hebraic word, of which the consonants alone are written, while the vowels must be supplied by the sense." [19]. . . "Every event in addition to its material and mechanical, its causative and natural interpretation, is capable of many other formal, figurative, metaphorical, and typical significations." [20]

The arbitrary assumption that serious thought can be employed only in discovering the mechanism of events was regarded by Hamann as injurious to art and morals. To dignify natural science with the sole prerogative of reason

[18] Eckermann, J. P., *Gespräche mit Goethe,* pp. 135-136 (ed. by Kroeber, 1913).

[19] *Schriften,* v. 1, pp. 508-509.

[20] *Schriften,* v. 7, p. 89.

would degrade the rest of literature. The dilettantism of French literateurs appeared to him a natural consequence of the scientific cult in French philosophy, since outside of science there could be nothing, in their hypothesis, except polite and playful literature.[21] But he was searching for a third alternative.[22] In his very first essay, the *Socratic Memorabilia* (1758), this dilemma appears as his fundamental problem. He is discussing the histories of philosophy, and asks whether we are condemned either to the method of Stanley and Brucker, "idle spectators of an olympian frolic,"[23] who give virtually no interpretation of their material, or, on the other hand, to the more recent contemporary effort to discover a single, scientific interpretation of history, as well as of nature. Both these methods seem unsatisfactory; the aimless, literary treatment yields no wisdom, while the scientific search for natural laws selects a single type of understanding as the exclusive purpose of historic study. Without solving the problem thus raised Hamann suggests that "philosophy be studied in relation to the various complexions of ages, individuals, races, and nations."[24] History is not merely a story to be told, nor is it a movement to be understood according to certain natural laws; it has an inexhaustible meaning. "As nature was given us to open our eyes, so history to open our ears,"[25]— to open them for all kinds of instruction, poetic, moral, and religious as well as scientific.

Nature was given us to open our eyes, and history to open our ears.— In this sentence is expressed an egocentric view of things, entirely independent of Kantian epis-

21 The title of a book (1720) by the German rationalist Thomasius is interesting in this connection: *Serious, yet withal playful, thoughts on all kinds of juridical questions.*

22 Philosophy, says one of our own thinkers wrestling with this problem, embraces the whole field of "intellectual literature."

23 *Schriften*, v. 2, p. 16 (see pp. 13-20).

24 *Schriften*, v. 2, p. 15.

25 *Schriften*, v. 2, p. 17.

temology.[26] It makes no difference whether "our knowledge conforms to objects, or whether objects conform to our knowledge;" [27] in either case the universe may be defined as that which we know, plus the unknown. And this way of defining it is egocentric in the broadest sense, being an approach to things from the individual outward.

"The eye is the first circle," says Emerson. "The horizon which it forms is the second; and throughout nature this primary picture is repeated without end. . . . There is no outside, no inclosing wall, no circumference to us." [28]

It is not only Hamann, observe, but the whole company of romantic idealists whom we are considering that makes such an approach.[29] They all seek to understand the universe as the realm of their experience. And they refuse to set its limits, or define its ultimate character, by measuring external magnitudes, such as the distances between the stars. For Goethe, "Nature is incommensurable;" [30] for Schleiermacher too it is "an unknown quantity;" [31] and for Hamann, "a cabalistic sign, an equation of unknown degree." [32] Contrast herewith the language of that earlier poet who learned from Newton the plan by which the universe was made!

The German idealists, of course, were not independent of Kant. Such is not our contention. Nothing herein said is incompatible with the opinion of some philosophers [33]

26 It was written, of course, twenty-three years before the *Critique of Pure Reason* appeared.

27 Kant, I., *Critique of Pure Reason* (preface to 2nd ed.), p. 28 (Philosophische Bibliothek).

28 Emerson, R. W., *Circles*.

29 The verb in the quotation "was given us" is not so generally apt, since most of them retained less of the traditional theism than he, but the predicates characterizing nature and history, "to open our eyes and ears," are entirely appropriate.

30 Eckermann, J. P., *Gespräche mit Goethe*, p. 97.

31 Schleiermacher, F. D. E., *Reden* (Note 2), p. 26 (Reimer 1831).

32 *Schriften*, v. 1, p. 509. (See above p.)

33 T. H. Green, for instance, and the idealistic school generally.

that Kant's work was a necessary step in the development of idealistic metaphysics. His successors certainly occupied themselves with the problems raised by his epistemological reflections, and some of their most characteristic views are based upon the partial acceptance of his conclusions. Many historians of philosophy, however, go further, and give the impression that, after Kant had discovered a solution to the rationalist-empiricist impasse in his theory of transcendental mind, the chief interest of his successors was to build comprehensive systems upon the basis of this theory. Without deciding whether this interpretation emphasizes the proper elements in the case, we may recognize that it is stressing an aspect, and by no means telling the whole story. Kantianism coincided with a larger situation, was itself a part of a larger situation in the intellectual life of 18th century Germany, to which the idealistic philosophies were addressed, and in relation to which they have their fullest significance.

What this larger situation was has been suggested, first abstractly, and then more concretely in some of its phases as they appear in Hamann's philosophy. There was a very general and growing belief that the knowledge men possessed was inadequate to establish the hitherto accepted metaphysical finalities. There was wide-spread criticism of moral standards and social institutions. There was the French revolution. And this prevailing uncertainty with regard to ultimates was accompanied, indeed caused in great part, by extensive activity along many original lines, new developments in government and commerce, in science and in art. The idealistic philosophies of Germany (1790-1830) are vast imaginative syntheses immortalizing in universals the experience of individual minds as they grapple with this situation. In these syntheses the self is naturally

central; its motives lead the way through the surrounding regions of being, and govern there. So that the universe in all its provinces from arithmetic to politics and music appears a boundless realm of spiritual adventure.

The egocentricity and monistic absolutism which characterize German idealism may be interpreted epistemologically, that is as inventions in the interest of validating science. But other interests, less special than the epistemological, broader human interests also make for monistic absolutism and an egocentric view of things. The example of Hamann, whose philosophy developed prior to the *Critique of Pure Reason*, and who was not primarily interested in the problems of knowledge, illustrates this. It shows how naturally the individual, when ultimate finalities are questioned, falls back upon himself, and seeks within himself some principle of guidance. The rationalistic theologians reasoned from a certain orderliness in nature as a whole to a supernatural intelligence. They found the most impressive evidence for nature's orderliness as a whole in Newton's laws of gravitation. Hamann did not consider the evidence sufficient. He was unprepared to pass judgment upon nature as a whole; he did not know whether it was orderly or chaotic, good or bad.

> "A philosopher who admonishes me," he says, "to look upon the Whole, sets before me a task as difficult as does he who bids me look into his heart. The Whole is as much concealed from me as is his heart. Does he think I am a God?" [34]

But though Hamann felt himself unable to pass judgment upon nature as a whole, he nevertheless was quite convinced that in the parts of nature, which he had experienced, there lay a divine significance and opportunity. Every specific situation, in which he found himself, pre-

[34] *Schriften*, v. 1, p. 491.

sented a challenge to him, a challenge to discover the Divinity therein. And by the Divinity he meant that which alone could satisfy his soul.

> God is in the least parts of the world, not only in the plan of the whole;[35] we discover Him through immediate impressions, not by inferences;[36] and whether or no we can prove this to be the best of possible worlds, yet if God rules within our hearts, His ways will ever be pleasing to our eyes.[37]

Such egocentric theology is typical of romantic idealism. The quest for God hinges upon finding that which most satisfies, or absolutely satisfies your soul. In a creature so volatile as man this undertaking has its difficulties. May not those first principles of idealistic metaphysics, *jene Absolute Ideem*, those *Begriffe* which we heard Fichte call philosophical,[38] be regarded as attempts to fix in idea the supreme passion of the soul, or to harmonize the various desires elicited in its spiritual career? Certainly monistic absolutism arises in response to moral needs felt outside as well as inside the philosophic workshop.

The relevance of *idealism* to broad and abiding human interests has never been overlooked; indeed it has been rhetorically emphasized. But it has not been studied with anywhere near the same patience and imagination that have been lavished on attempts to give rigid proof of idealistic formulas. Josiah Royce, for example, did not study in any detail the relation between the idealistic systems of Germany and their entire setting. He constantly stressed their broadly human significance, but he saw that significance in terms of the post-Darwinian issue between an optimistic and a pessimistic *Weltanschauung*. "A religiously encouraging vision as the deepest truth of

[35] *Schriften*, v. 1, p. 511.
[36] *Schriften*, v. 7, p. 418.
[37] *Schriften*, v. 1, p. 448.
[38] See above p.

things''[39] was for him the precious pearl imbedded in all these vast philosophies. He tends to exaggerate the anxious devotion of Fichte, Hegel, and the rest to this single end. They moved in a somewhat freer religious atmosphere than Royce depicts, which enabled their thought to enter more deeply than he is inclined to follow into the details of history and politics and art. The significance of their philosophies, however, hinges upon their attitude toward these details as well as upon their more abstract and highly generalized metaphysical doctrines.

George Santayana grants German idealism not only a broadly human, but an all too human significance. In essence it seems to him ''the primal and universal religion of Heathenism unmasked.''[40] The glorification of Will which pervades it is so offensive to him that he will not linger to develop his illuminating suggestions toward a discriminate understanding of the particular kinds of will glorified. He is satisfied to criticize them all by pointing out the limitations of will on the animal level, the will of a maddened bull in the arena, for example. But the wills reflected in these idealistic systems should be approached on the biographical, historical level. For philosophy of this type can be understood only as articulating those attitudes by which an individual's personality and life are organized. This conception has governed the scholarship of men like Haym and Dilthey,[41] and it is this scholarship which has thus far given us the most adequate interpretations of the German idealists.

German scholars, however, like to be exhaustive. A new idea tends to become an excuse for a massive work repeat-

39 Royce, J., *The religious aspect of philosophy*, p. 242.

40 Santayana, G., *Egotism in German philosophy*, pp. 147-148.

41 And *idealism*, in this sense, pervades much of contemporary German philosophy. (See the articles in *Die Deutsche Philosophie der Gegenwart in Selbstdarstellungen*, ed. by R. Schmidt, 1921.)

ing all facts known about the subject. This unfortunate habit enslaves imagination, and may be the reason why so much still remains to be done in the interpretation of German idealistic philosophy. For if we regard the moral idealism of Fichte and his contemporaries as the key to their metaphysical idealism, many interesting and as yet unanswered questions suggest themselves. We begin to wish for a much fuller picture than we possess of the problems which these men felt, their habits of thought, the detail of their beliefs, and their concrete ideals. To satisfy these needs was not the ambitious project of this paper, but merely to bring them forward by showing that the idealistic philosophies are rooted in the whole situation in which they arose, and not simply in the philosophic tradition preceeding them.

THE MISSING LINK IN THE CASE FOR UTILITARIANISM

Wm. Pepperel Montague

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I

An Analysis of the Two Minor Objections and of the One Major Objection to Utilitarianism

Utilitarianism is beset by three objections which come as it were from the Left, the Centre and the Right. The objection from the Left is primarily logical; that from the Centre is primarily psychological; while the third objection which proceeds from the Right is primarily and properly ethical. It is with this last objection that my paper is mainly concerned; but before proceeding to a discussion of the problems which it raises I desire to comment briefly upon the arguments of those who find fault respectively with the altruistic logic and with the hedonistic psychology of Utilitarianism.

1. *The Egoist's objection to the altruistic logic of Utilitarianism.* It has been charged that John Stuart Mill and the other Utilitarians have failed to show any logical justification for adding to the self-evident reasonableness of each seeking his own good an alleged obligation of each to seek the good of all. This objection of the egoists has been answered by three more or less interconnected arguments, any one of which seems to me adequate to refute it.

In the first place the egoist may be reminded that the same principle of reason that would make us admit that facts when experienced by others are as much facts as

when experienced by oneself should also make us admit that values are as much values when experienced by others as when experienced by oneself. To recognize a thing as true is to feel a logical obligation to assent to it. To recognize a thing as good is to feel a moral obligation to strive for it whenever possible. Hence if the egoist would deny his obligation to seek the good of others, he must deny the existence of the good of others and maintain that no pleasure or other admittedly good thing can exist except inside his own skin.

Secondly, as Sidgwick and others have pointed out, the egoist, in admitting the validity of a value when it is to occur in his future self uses the same principle of reason that the altruist uses in recognizing the validity of a value when it is to occur in another self. From the standpoint of the mere feeling of the moment, one's future self is another self and the obligation of *prudence* that would bid us consider the welfare of what is temporally another self is no better justified than the obligation of *sympathy* that would bid us consider the welfare of what is spatially another self.

Thirdly, as my colleague, Professor Lord, has suggested, if despite the two answers just given, the egoist still persists in his ethical solipsism, he may be invited to consider the criterion by which he will evaluate the various kinds of self which he has it in him to become. For, granting his claim that it is only his own ego that he must serve, the question will at once arise as to which of his many potential egos he will try to realize. Will he best serve his egoistic ideal by becoming a saint or a swine? He cannot decide except by re-introducing the diverse theories of the nature of the truly good, which he supposed he had banished by limiting the domain of values to the circle of his own consciousness. In short, the egoist or solipsist in

ethics is in the same plight as the ordinary solipsist. When he has been exempted from the many objections to his theory and allowed to identify the universe with his ego, he finds in the new universe all the problems of facts and values that he found in the old universe. To locate the universe within oneself is always a sterile conceit and it is no more enlightening when it is the universe of values than when it is the universe of facts.

2. *The Behaviorist's objection to the hedonistic psychology of Utilitarianism.* The hedonistic tradition in terms of which Utilitarianism was formulated by Bentham and Mill has an element of subjectivistic psychology which is offensive to the objectivistic pragmatists and behaviorists of the present day.

When men attain what they have sought for, there usually occurs in their experience a peculiar and unanalyzable state of feeling to which we give the name "pleasure." Because pleasure in some form accompanies the attainment of any and every valued object, and also because it stands out as a clear and simple datum of introspective psychology, it was natural to assume that it was itself the essence of all value. The theory that the feeling of attaining the good is, itself, the only good which we should seek to attain is Hedonism; and the artificiality of the theory has been recognized not only by pragmatists and behaviorists, but by the long line of objectively-minded philosophers from Aristotle down. As a matter of fact, when thirsty men drink water or lonely men seek companions, it is water and companions that are desired rather than the states of pleasurable feeling which will probably result from the attainment of those desires. The valuing attitude is always directed at least primarily to objects rather than to pleasure. And even when the value attached to an object is revised in the light of the pleasure that it brings, there remains an element of

artificiality in substituting the feeling which measures the good for the good itself.

A second inadequacy of hedonistic psychology (or perhaps it is the same inadequacy expressed in a different way) consists in its restriction of the valuing attitude to the present as distinguished from the past and the future. Future values are *desired*, past values are *appreciated*, and it is only present values that are *enjoyed*. All will admit that these temporally distinct forms of valuing can vary independently, and differ from one another in degree even when applied to the same object. The enjoyment of an object may be more or less intense than the desire for it. And it is equally common for the appreciation of an object or its valuation in retrospect to differ in degree both from its prospective and from its contemporaneous valuation. It is not easy to decide as to which of the three temporal perspectives in which values are apprehended is the most reliable. In favor of measuring value in terms of the pleasure we derive from it, it may be urged that we are closest to a good when we are possessing or enjoying it and that its real value is therefore more correctly known when it is present than when it is past or future. But on the other hand it might be maintained that pleasure is not self-explanatory but is a resultant of fulfilling an organic need or tendency and that it is the need of the individual for some increment or complement of his nature that constitutes the objective basis of a value or a good. This conception of the good as *fulfillment of tendency* or *increment of psychic being* is best represented in consciousness by the experience of *desire*. In other words, we know better what we need when we need it than when we have it. And finally, the partisan of "appreciation" could make out a case for the superiority of the retrospective method of estimating value, by appealing to the fact that it was only after the

distracting excitements of desire and enjoyment had both passed away that the mind was sufficiently cool to form a judgment as to the real value of what it had desired and enjoyed.

If the hedonist replies to his two rivals by insisting that desire is only pleasure in prospect and that appreciation is nothing but pleasure in retrospect, he does but beg the question at issue. It could with equal justice be replied, first, that pleasure was merely the completion of desire, or, second, that it was the potentiality of appreciation.

It is not our purpose to attempt a solution of the problem as to which of the three temporal perspectives is least distortive of value. Whether or not the hedonist has the best of the triangular controversy, it is possible to restate the theory of utilitarianism without committing ourselves on what is, after all, more a matter of psychological interpretation than of ethics proper.

Let us use the word "happiness" to denote the attainment of any object that is either desired in prospect, enjoyed in the present or appreciated in retrospect. Using happiness in the sense just stated, the conventional formulation of Utilitarianism as the theory that the *summum bonum* consists in the greatest happiness of the greatest number has a meaning that is true to its essential ethical tradition but free from the objections that have been brought against the hedonistic psychology. For to identify value with happiness is not to identify it with the subjective feeling of pleasure but with any and all experiences the attainment of which is desired, enjoyed or appreciated.

And now having to the best of our ability disposed of the objections to utilitarianism which are chiefly logical and psychological in character, we are prepared to consider what is by far the most serious of the attacks that have been made upon the theory.

3. *The Intuitionist's objection to the ethics of Utilitarianism.* Everybody will admit that in addition to the *natural* valuation of desire, enjoyment and appreciation there is a distinctively *moral* valuation of "*approval.*" We do sometimes give this judgment of moral approval to things which neither in themselves nor in their consequences are objects of desire, enjoyment, or appreciation. Courage, justice, obedience to God's will are examples of things which, irrespective of their consequences for happiness, may elicit moral approval. Now it is the contention of Utilitarians that such judgments of moral approval are merely *de facto* and not *de jure*, and that they can be and should be reduced to the natural valuations of desire, appreciation and enjoyment which constitute happiness. Anti-Utilitarians, or Intuitionists, on the other hand, contend that the distinctively moral judgments of approval are *de jure* as well as *de facto,* and that they cannot be and should not be reduced to the natural values constituting happiness.

The chief argument in support of the Utilitarian claim is that analysis will show that in many cases the distinctively moral valuations have arisen and been maintained on account of their supposed efficacy for happiness and that they are thus cases of the transfer of an original natural valuation to something associated with it. While as for those cases of moral approval which can be shown by analysis to have no bearing upon anyone's happiness, the Utilitarian claims that when once this lack of relation to happiness is clearly perceived, the human conscience will cease to feel any reason for retaining its attitude of approval. In short, for the utilitarian, *all seemingly non-eudaemonistic valuations exist by reason of a neglected but tacit assumption of their derivation from valuations that are eudaemonistic.*

The principal argument in support of the intuitionist position is the claim that no amount of analysis can reduce

the qualitative hierarchy of moral valuations to the quantitative hierarchy of degrees of happiness. We feel for example that the happiness of a Socrates is morally higher than the happiness of a pig. If this moral difference were reducible to mere difference in the quantities of happiness involved it should be possible by increasing the number of pigs, together with the intensity and duration of their happiness, to get a quantity of moral value equal to that embodied in a Socrates. Merely to state the case is sufficient to reveal its impossibility. No amount of pig-happiness, however great, could equal Socratic happiness, however small. But, if the greater quantity of goodness in the case of Socrates is not a greater quantity of happiness, then goodness must be something other than happiness. And it is by partaking of this *quality other than happiness* that all values, including happiness itself, are ultimately evaluated. The anti-utilitarians may differ among themselves as to the nature of the final and non-eudaemonistic value in which they all believe. Some will define it as Kant did in terms of an absolute reasonableness or self-consistency; others will agree with Martineau in regarding it as a self-evident and not further analyzable sentiment of *preference* which reveals a clear-cut hierarchy of the virtues, no one of which is reducible to any other. Still others will hold that conformity to God's will is the supreme and self-evident principle of value.

It seems to me that the positive arguments of the utilitarians fail to meet the chief point that is raised by the intuitionists. We must admit I believe that such arguments as those contained in Mill's analysis of justice suffice to prove that all cases of distinctively moral valuation can be shown either to have a connection with eudaemonistic valuation or else to be no true values at all. But granted that a reference to happiness must be admitted as an essential

part of valuation, it still remains for the utilitarian to convince us that it is the whole of value. It is this that has not been proved. The happiness of a Socrates is adjudged superior to any quantity of happiness on the part of a pig, and the intuitionist argues that this *incommensurability* of the two quantities of happiness implies a principle of goodness other than that of happiness itself.

It is the failure to meet this argument that constitutes the real weakness or gap in the long chain of evidence by which the ethics of "greatest happiness" is established. I think it may properly be called "the missing link in the case for utilitarianism."

The difficulty was recognized by John Stuart Mill himself. In a well-known passage occurring on pages 7 and 8 of his *Utilitarianism*, Mill writes on the subject as follows:

> It is quite compatible with the principle of utility to recognize the fact that some *kinds* of pleasure are more desirable and more valuable than others. It would be absurd that while, in estimating all other things, quality is considered as well as quantity, the estimation of pleasures should be supposed to depend on quantity alone.
>
> If I am asked, what I mean by difference of quality in pleasure, or what makes one pleasure more valuable than another, merely as pleasure, except its being greater in amount, there is but one possible answer. Of two pleasures, if there be one to which all or almost all who have experience of both give a decided preference, irrespective of any feeling of moral obligation to prefer it, that is the more desirable pleasure. If one of the two is, by those who are competently acquainted with both, placed so far above the other that they prefer it, even though knowing it to be attended with a greater amount of discontent, and would not resign it for any quantity of the other pleasure which their nature is capable of, we are justified in ascribing to the preferred enjoyment a superiority in quality, so far outweighing quantity as to render it, in comparison, of small account.

The doctrine here set forth by Mill has been regarded by many as a surrender to the intuitionist. In a previous passage Mill has explicitly defined "happiness" as "pleasure and the absence of pain;" and in the passage quoted

he admits the necessity of recognizing a quality by the possession of which a quantitatively smaller pleasure is and should be preferred to a quantitatively larger pleasure. This is exactly what intuitionists like Martineau would claim. And when Mill declares that the qualitative principle can only be described as an intrinsic and unanalyzable *preference* of one pleasure to another that would be felt by an individual who had experienced both, he is in a slightly more empirical fashion expressing the particular species of intuitionism which Martineau defends. If pleasures are to be preferred on any other principle than their own intrinsic quantity then it is in that principle as well as in pleasure itself that true and ultimate value must be sought. And whether with Mill and Martineau we regard the new principle as an indefinable preferability or superiority, or whether with Kant and others we attempt to analyze it further, the fact remains that we have abandoned the attempt to reduce all values to happiness alone.

Now I believe that it is possible to admit that some kinds of happiness are incommensurably higher than other kinds without invoking a principle of qualitative superiority which would deliver us into the hands of the intuitionists. And in the second section of my paper I shall try to explain and justify the use of the categories of *potentiality* and *dimensionality* as adequate to this purpose.

II

A Possible Answer to the Major Objection to Utilitarianism

Man can be considered as a producer of happiness in others and as a consumer of happiness in himself. Viewed in either capacity his rational or spiritual character bears to his sensory or physical nature a relation analogous (1) to the relation of a permanent potentiality to its successive

actualizations; and (2) to the relation of a being of higher dimensionality to a being of lower dimensionality. My thesis will be that both as a producer and as a consumer of happiness the spiritual value or virtue emphasized by Intuitionists is the *volume* of which the natural value or pleasure emphasized by Utilitarians is the *surface.*

1. *Man as a Producer of Happiness.* When Mill defined matter as the permanent possibility of sensation or of sensory perception he offered a conception which gave to the prevailing positivism or phenomenalism of his day precisely the corrective that was most needed. It is difficult for even the staunchest of positivists to believe that the full reality of an existent body such as a table can be adequately exhausted by any number of merely actual perceptions of it. At the same time, his well-grounded aversion to admitting non-experienceable entities makes him loath to supplement the fleeting appearances by anything with a definite nature of its own such as atoms or souls. Now Mill's conception of a body as a permanent possibility of perception permits our positivist to harmonize his natural human craving for something *substantial* with his acquired philosophic aversion to anything *not phenomenal.* To Mill the table in itself is nothing alien *to* experience but it is infinitely rich in its potentialities *of* experience. It is like a sphere which while not alien in nature to the circles which constitute its cross-sections is nevertheless incapable of being exhausted by those circles, no matter how great their number.

Suppose now that we use an analogy drawn from Mill's physical philosophy to fill in the apparent gap in his moral philosophy. Let us define *virtue* as the *permanent potentiality of happiness.* Habits of character such as courage and charity will then appear neither as things mysteriously alien to happiness nor on the other hand as merely instru-

mental or transient causes of happiness. They will bear to happiness the same relation that Mill believed bodies to bear to our experience of them. They will be the substantive rather than transient causes of happiness. And the happiness of which a virtue is the permanent potentiality will be related to that virtue as a surface is related to the volume of which it is the cross-section. The tender and courageous character will be a potentially infinite producer of happiness. And in this infinity of the cause lies hidden the secret of its superiority to any and all of its effects. Conscience revolts against any form of utilitarianism that would make happiness equal in value to virtue. But this by no means justifies the intuitionist's assuming that the value of virtue is alien in kind to the value of happiness. Its incommensurable superiority is due to its higher dimensionality. The volume is incommensurate with the surface, but its superiority is one of infinite quantity rather than of sheer quality. To suppose that virtue has a principle of value other than the value of happiness is to violate our ethical reason. While to suppose that the value of happiness is commensurable with the value of virtue is to violate our moral sentiment. To reconcile the qualitative homogeneity of happiness and virtue with their quantitative incommensurability is to harmonize utilitarian theory with human conscience. It is my contention that the conception of virtue as the permanent potentiality of happiness and therefore a substantive cause of higher dimensionality than its transitory effects brings about the harmony in question.

2. *Man as a Consumer of Happiness.* When we consider man as a producer of happiness, we consider his virtues in relation to their effects in others. Suppose now that we consider the character of man not as a producer but as a consumer of value. Or to put the matter in words that may appear less strained: we are to turn from the

inquiry into the relation between happiness and the virtue that causes it and consider the relation between sensory happiness and the incommensurably superior happiness that we may call spiritual or rational.

Reason is not opposed to the senses; it is rather their harmonizer. And sensations are harmonized not by any external power but by an internal reference of each actual sensation to the totality of possible sensations. Reason, whether theoretical or practical, whether concerned with perceptions or with desires, is nothing other than the capacity to estimate the part in the light of the whole.

Rational beings differ from merely sensuous beings not in the possession of some unanalyzable quality but in the infinitely and therefore incommensurably greater volume of their needs. The needs of the sensuous nature are for *this and that, here and now.* The rational nature on the other hand apprehends the past and the future as well as the present, the distant as well as the near, and therein possesses needs and capacities which without being alien in quality are infinitely richer in quantity than the needs and capacities of the senses. The rational or spiritual being is in short of a higher dimensionality than the merely sensory being. Now if happiness is the possession of whatever is desired, enjoyed or appreciated; and if a rational being is of higher dimensionality than a merely sensory being, then the fulfillment of the needs of the rational being will constitute an incommensurably greater happiness than the fulfillment of any sensory needs no matter how great their number or their intensity. Man is a producer of happiness in others insofar as he possesses virtues; he is a consumer of spiritual happiness in himself insofar as he possesses an infinite system of capacities in which the virtues are included.

It is the conception of spirit as having a higher dimen-

sionality than sense that enables us to agree with Mill that no amount of pig-happiness could equal the happiness of Socrates, and to maintain at the same time that the difference between the two kinds of happiness is quantitative rather than qualitative. The concept of dimensionality thus affords a means of providing for the incommensurability of kinds of happiness without going outside the principle of happiness itself in determining the nature of the good.

III

Conclusion

I have attempted to fill a gap in the logic of Utilitarianism by showing how it is possible to concede the incommensurable superiority of spiritual satisfaction to sensory happiness without appealing to any quality of value other than happiness itself; and I have used the category of spatial dimensionality to illustrate this combination of homogeneity of quality with incommensurability of quantity.

Some readers will feel that my introduction of dimensionality into the realm of value is no more than an analogy, and one that is artificial and unenlightening. To them I would appeal to entertain the argument even while discarding the terms in which I have couched it. Quite apart from the concept of dimensionality is it not possible in general to regard one thing as infinitely or incommensurably greater than another without conceding a difference in quality? If this is possible in general, may it not be actually exemplified in the relation between the two kinds of satisfaction which are termed moral and sensory? If such is the case, the utilitarian ethics is on the one hand freed from the *inconsistency* which resulted from Mill's appeal to a quality other than pleasure for evaluating pleasures; while on the other hand it is freed from the *inadequacy*

which results if to escape the inconsistency of Mill we admit that the satisfactions of a pig are commensurable with those of a human being.

The question under discussion involves issues far more important than the dialectical consistency or adequacy of a particular theory of ethics. In all ethical theory and in all moral practice there is implicit the same dilemma as that which becomes technically explicit in the logic of utilitarianism. The problem in this larger setting may be stated as follows: The term "good" in its primary and intrinsic meaning is applied to two classes of things: the happy satisfactions of desire and the virtuous satisfactions of conscience. Happiness and virtue are each of them ultimately and irreducibly "good;" but since they often appear incompatible, there arises as the ground-problem alike of moral conduct and of ethical theory, the question of their mutual adjustment. For this problem there are two general types of solution, each of them with many special forms. The one type of solution takes the natural satisfactions of desire as constituting the essential good; the other takes the spiritual satisfactions of conscience as constituting the essential good. Each of these rival schools has yielded on occasion to the temptation to postpone and obscure the main problem in three ways: (1) by a transcendental theology according to which God harmonizes happiness with virtue; or (2) by a transcendental cosmology according to which some law of Karma automatically accomplishes the same result; or (3) by a transcendental psychology according to which conscience is declared, despite evidence to the contrary, to be a source of extreme pleasure to those who follow it. Sooner or later, however, the exigency of the ethical problem itself forces it out from these metaphysical shades into the light of explicit attention. And there then develops an apparently incurable

weakness in each of the alternative theories between which we seem forced to choose.

These weaknesses are respectively the weakness of *worldliness* and the weakness of *other-worldliness.* The "happiness-ethics" suffers from "worldliness" because it can find no legitimate way in terms of mere happiness of according to the satisfactions of conscience the dignity which experience demands for them. The "conscience-ethics" suffers from "other-worldliness" because it can find no legitimate way in terms of mere conscience of according to the satisfactions of desire the value which experience demands for them. The one way is broad but shallow, the other deep but narrow.

John Stuart Mill saw the necessity of an ultimate reduction of the content of the good to happiness, but he also saw the impossibility of reducing the dignity of conscience and of spiritual satisfactions to any quantity of sensory satisfactions. Hence his attempt to combine hedonism with a non-hedonic principle of evaluation.

I believe that Mill's solution of this ground-problem of ethics can be made self-consistent (1) by conceiving of human nature as possessing an undeniable element of spirituality which should be sacrificed to nothing; but (2) by conceiving of this spiritual nature expressed in conscience as not qualitatively alien to sensory desires but infinitely or incommensurably greater in magnitude than they are. Spirit is to be thought of as the permanent potentiality of desire and sensory satisfaction as the temporary actualization of spiritual need. The one is to the other as the sphere is to the circle.

Dialectical compromises can often be made to display their hollowness by applying the pragmatic test. How would a defender of such a compromise as I am proposing apply his theory to concrete problems? — as an intuitionist,

or as a utilitarian? Lacking space really to meet this just pragmatic query, I can only roughly indicate the line of answer. The *subjective* motives of the intuitionist would be respected and praised while the *objective* purpose of the utilitarians would be preached and enforced. When a misguided and traditional conscience conflicted with a liberal and enlightened happiness it would be the duty of the individual to follow his conscience and the duty of society to control and educate him. Such a policy would result in many conflicts, but it would make possible the scientific clarification of ethics which is desired by the utilitarians and would at the same time conserve those spiritual dignities and enthusiasms which are cherished by intuitionists.

THE SIGNIFICANCE OF BENJAMIN FRANKLIN'S MORAL PHILOSOPHY

Herbert W. Schneider

THE SIGNIFICANCE OF BENJAMIN FRANKLIN'S MORAL PHILOSOPHY

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Although Benjamin Franklin was regarded by his contemporaries both here and in Europe as the foremost philosopher of America, he is rarely mentioned in philosophical circles today. This fact means neither that he was overestimated by his contemporaries, nor that he has been underestimated by succeeding generations, but merely that the term "philosophy" has undergone a radical change of meaning. Franklin's fame as a philosopher was due to his interest in, and contributions to physical sciences, — primarily his discoveries and theories in the field of electricity. In France, this was enough to secure him warm welcome among the philosophers. In addition to his scientific interests, his liberal attitude in matters moral and religious made him all the more esteemed among "les philosophes." At the time, philosophy, at least in France and America, was *natural philosophy*. The human mind, under the spell of Newton and his "laws," made the Newtonian conception of the universe the starting point of all philosophical speculation, and subordinated what moral and political philosophy there was, both in interest and in method, to the Newtonian concept of nature. Since then the attention of philosophers has shifted to other fields, and the type of interest represented by Franklin and the eighteenth century "natural philosophy" has been left almost entirely to the "natural scientists." So it happens that the once famous "philosopher" is today celebrated only by the physical scientists.

He has recently been revived philosophically by Professor Riley and included in his history of American philosophy. His title to philosophic recognition on the part of Professor Riley, however, rests chiefly on several early sketches, — one a *Dissertation on Liberty*, one on *First Principles*, and some *Dialogues Concerning Virtue and Pleasure*. These pieces show real speculative ability in the young Franklin, according to Professor Riley, but unfortunately were abandoned early as idle speculations. Thus ended Franklin the philosopher, another victim of the damning influence of Philadelphia's "crass utilitarianism!"

Nevertheless, in American intellectual life Franklin remains a dominant figure neither because of his scientific discoveries, nor because of his youthful *jeux d'esprit*, but because of his moral philosophy. The type of morality for which he stands in the American tradition, although well-known, is usually scorned and spurned by philosophers as mere journalism, popular precepts, empirical maxims, unworthy of philosophic dignity. I hope to show in what follows that Benjamin Franklin's ethics is not only basic in American moral traditions, but also that it involves a real philosophy, and marks a significant achievement in ethical theory.

What is designated as the Benjamin Franklin morality is probably too familiar to require detailed description. A few of Franklin's own words give its chief outlines. As a young printer in Philadelphia, he wrote the following[1]:

> Those who write of the art of poetry teach us that, if we would write what may be worth reading, we ought always, before we begin, to form a regular plan and design of our piece; otherwise we shall be in danger of incongruity. I am apt to think it is the same as to life. I have never fixed a regular design in life, by which means it has been a confused variety of different scenes; I am now entering upon a new one; let me, therefore, make some resolutions, and

[1] *Autobiography*: Ch. on "The Art of Virtue," footnote.

form some scheme of action, that henceforth I may live in all respects like a rational creature.

1. It is necessary for me to be extremely frugal for some time, till I have paid what I owe.

2. To endeavor to speak truth in every instance, to give nobody expectations that are not likely to be answered, but aim at sincerity in every word and action; the most amiable excellence in a rational being.

3. To apply myself industriously to whatever business I take in hand, and not divert my mind from my business by any foolish project of growing suddenly rich; for industry and patience are the surest means of plenty.

4. I resolve to speak ill of no man whatever, not even in a matter of truth; but rather by some means excuse the faults I hear charged upon others, and, upon proper occasions, speak all the good I know of everybody.

From his famous chapter on "The Art of Virtue" in the *Autobiography*, I quote the following:

In the various enumerations of the *moral virtues* I had met with in my reading, I found the catalogue more or less numerous, as different writers included more or less under the same name. *Temperance*, for example, was by some confined to eating and drinking; while by others it was extended to mean the moderating every other pleasure, appetite, inclination, or passion, bodily or mental, even to avarice and ambition. I proposed to myself, for the sake of clearness, to use rather more names, with fewer ideas attached to each, than a few names with more ideas and I included under thirteen names of virtues, all that at that time occurred to me as necessary or desirable; and annexed to each a short precept, which fully expressed the extent I gave to its meaning.

These names of *virtues*, with their precepts, were:

1. TEMPERANCE — Eat not to dulness; drink not to elevation.

2. SILENCE — Speak not but what may benefit others or yourself; avoid trifling conversation.

3. ORDER — Let all your things have their places; let each part of your business have its time.

4. RESOLUTION — Resolve to perform what you ought; perform without fail what you resolve.

5. FRUGALITY — Make no expense but to do good to others or yourself; that is, waste nothing.

6. INDUSTRY — Lose no time; be always employed in something useful; cut off all unnecessary actions.

7. SINCERITY — Use no hurtful deceit; think innocently and justly; and, if you speak, speak accordingly.

8. JUSTICE — Wrong none by doing injuries, or omitting the benefits that are your duty.

9. MODERATION — Avoid extremes; forbear resenting injuries so much as you think they deserve.

10. CLEANLINESS — Tolerate no uncleanliness in body, clothes or habitation.

11. TRANQUILITY — Be not disturbed at trifles, or at accidents common or unavoidable.

12. CHASTITY — Rarely use venery but for health and offspring, never to dulness, weakness, or the injury of your own or another's peace or reputation.

13. HUMILITY — Imitate Jesus and Socrates.

My intention being to acquire the *habitude* of all these virtues, I judged it would be well not to distract my attention by attempting the whole at once, but to fix it on one of them at a time; and when I should be master of that, then to proceed to another; and so on, till I have gone through the thirteen. And, as the previous acquisition of some might facilitate the acquisition of certain others, I arranged them with that view, as they stand above.

It may be well posterity should be informed, that to this little artifice, with the blessing of God, their ancestor owed the constant felicity of his life. . . . To *Temperance* he ascribes his long-continued health, and what is still left to him of a good constitution; to *Industry* and *Frugality*, the early easiness of his circumstances and acquisition of his fortune, with all the knowledge that enabled him to be a useful citizen, and obtained for him some degree of reputation among the learned; to *Sincerity* and *Justice*, the confidence of his country, and the honorable employs it conferred upon him; and to the joint influence of the whole mass of the virtues, even in the imperfect state he was able to acquire them, all that evenness of temper, and that cheerfulness in conversation, which makes his company still sought for, and agreeable even to his young acquaintance."[2]

2 This prayer is also taken from the *Autobiography*:

"O powerful Goodness! bountiful Father! merciful Guide! Increase in me that wisdom which discovers my truest interest. Strengthen my resolution to perform what that wisdom dictates. Accept my kind offices to Thy other children as the only return in my power for Thy continual favors to me."

In his famous "The Way to Wealth," which is a compilation of the best of his sayings as "Poor Richard," Franklin's moral doctrine takes this more popular form:

It would be thought a hard government that should tax its people one tenth part of their time, to be employed in its service: but idleness taxes many of us much more; sloth, by bringing on diseases, absolutely shortens life. "Sloth, like rust, consumes faster than labour wears, while the used key is always bright," as poor Richard says. "But dost thou love life, then do not squander time, for that is the stuff life is made of," as poor Richard says. How much more than is necessary do we spend in sleep! forgetting that "the sleeping fox catches no poultry, and that there will be sleeping enough in the grave," as poor Richard says.

If time be of all things the most precious, wasting time must be, as poor Richard says, "the greatest prodigality;" since, as he elsewhere tells us, "lost time is never found again, and what we call time enough always proves little enough:" let us then up and be doing, and doing to the purpose; so by diligence shall we do more with less perplexity. "Sloth makes all things difficult, but industry all easy; and he that riseth late, must trot all day, and shall scarce overtake his business at night; while laziness travels so slowly that poverty soon overtakes him. Drive thy business; let not that drive thee; and early to bed, and early to rise, makes a man healthy, wealthy, and wise," as poor Richard says.

Methinks I hear some of you say. "must a man afford himself no leisure?" I will tell thee, my friend, what poor Richard says; "employ thy time well, if thou meanest to gain leisure; and since thou art not sure of a minute, throw not away an hour." Leisure is time for doing something useful; this leisure the diligent man will obtain, but the lazy man never; for a life of leisure and a life of laziness are two things. Many, without labour, would live by their wits alone, but they break for want of stock; whereas industry gives comfort and respect. "Fly pleasures, and they will follow you. The diligent spinner has a large shift; and now I have a sheep and a cow, everybody bids me good-morrow."

In its naive simplicity this hardly seems worthy of study as a philosophy. It makes no pretense of being founded on a cosmology, a metaphysics, a theory of knowledge, or an analysis of human nature. It is derived merely from the

experience of an ordinary business man, and yet as a moral regime and an outline of "the art of virtue," it has a clarity and a power that command respect and study.

The freedom of this morality from "entangling alliances" with cosmology, psychology, and epistemology is in itself a philosophic achievement, and its detachment from the speculative disputations of the time was deliberate. Franklin was not ignorant of them; he was as well versed in contemporary philosophies as an American youth could be. Nor was he, as is generally supposed, uninterested in the problems of deism, theology, and the metaphysical bases of vice and virtue. Here is his confession and his condemnation of his early speculative and "disputatious" habits.[3] "We sometimes disputed, and very fond we were of argument, and were desirous of confuting one another — which disputatious turn is apt to become a very bad habit, making people often disagreeable in company, by the contradiction that is necessary to bring it into practice; and thence, besides souring and spoiling the conversation, it is productive of disgusts, and perhaps enmities, with those who may have occasion for friendship. I had caught this by reading my father's books of dispute on religion. Persons of good sense, I have since observed, seldom fall into it, except lawyers, university men, and generally men of all sorts, who have been bred at Edinburgh."

The Deists fared no better at his hands, and merely gave him added reasons for divorcing morals and philosophical speculations. He had early given up the theological polemics of the New England churches as meaningless. "The arguments of the Deists," he says, "which were quoted to be refuted, appeared to be much stronger than the refutations; in short, I soon became a thorough Deist."[4]

3 *Autobiography.*
4 *Autobiography.*

Such experiences as reading Locke's Essay, and setting type for Wollaston's "Religion of Nature," as well as his friendships among the deists of London, made him familiar with the popular radical philosophy of the time. But his reaction was almost immediate. A tract on *Vice and Virtue,* published during his year in London, clearly pointed out the fundamental difficulties of deistic ethics. The object of this tract was not, as Professor Riley states, to "prove the doctrine of fate"[5] but to prove that, starting with God's attributes of wisdom, goodness, and power, "vice and virtue were empty distinctions." In other words, he made the discovery, which is made every now and then by consistent thinkers, that moral distinctions vanish in the absolute, or, that for a human being good and evil must be relative to a human point of view. A few years later he used the same sort of reasoning on prayer and predestination. Franklin's own summary of it appeared in a letter to Vaughn in 1779; "Almost all men, in all ages and countries, have at times made use of *Prayer.* Thence I reasoned, that, if all things were ordained, prayer must be among the rest ordained. But, as prayer can procure no change in things ordained, praying must then be useless, and an absurdity. God would therefore, not ordain praying, if everything else was ordained. But praying exists, therefore all other things are not ordained, &c." At first, in his eagerness to be counted one of the clever deistic intellectuals, he concluded from such considerations that morality did not exist. Soon, however, he saw the folly of this, and drew the other conclusion, viz. that, since morals are a fact, they are independent of Deism. From that time on he treated virtues and vices in their own terms, as elements

5 I. Woodbridge Riley: *American Philosophy, the Early Schools.* p. 244. I think Professor Riley here wrongly interprets a remark made by Franklin in his Autobiography.

of human experience, as facts to be understood and estimated in terms of their relations to the rest of life. This discovery he mentions in the autobiography with his characteristic simplicity. "I grew convinced that *truth, sincerity,* and *integrity,* in dealings between man and man, were of the utmost importance to the felicity of life." [6]

Many more evidences might be given, did space permit, of the reasons which led Franklin to turn his back on theology and on metaphysics, but these are sufficient to make clear that this divorce between morals and "philosophy" is a mark not of his philosophical ignorance, but of his moral wisdom. It is an achievement all the more remarkable since it was made in an intellectual atmosphere which offered little encouragement to it.

The real basis of Benjamin Franklin's ethics is empirical and can be found in the facts of life in Puritan New England. Recent historical writings have emphasized the importance of frontier conditions in the development of American life. No where is this more evident than in early New England, where the colonists were face to face with a most difficult situation. Other colonies with more auspicious beginnings had failed. Merely to maintain a physical existence was difficult enough in New England. The most optimistic sociologist could have predicted at best a rude, barbaric future for these adventurers. But no! Hardly had they found shelter there when they began building churches and schools, and soon there appeared among the New England pioneers, *home trained* scholars, writers, ministers, lawyers, — a most amazing burst of intellectual life. Such results can be obtained only by extremely hard labor, they were the fruit of a severe moral discipline. The New Englanders were forced to be Puritans because of their desire to build a New England, not,

[6] *Autobiography.*

as is commonly supposed, because of their Calvinism. The "agonized conscience" or sense of sin, supposedly consequent on the Calvinistic doctrine of depravity and of predestination either to damnation or to election, can be no adequate explanation of the Puritan moral discipline. No doubt the Calvinistic theology exaggerated the sternness of Puritan morality, but its direct and principle cause is to be found rather in the exacting demands of pioneer life. Something great was to be achieved, and everybody bent himself to the task.

The churches were the backbone of the process. The clergy were careful that God should command whatever needed doing, and prohibit whatever proved an obstacle! Labor was scarce; God's first command was "increase and multiply." Soberness and diligence were essential; drunkenness, dancing, card-playing, and idling in general were "most ungodly." Although keeping religious holidays in New England was condemned on the grounds of "popery," the real reason was quite generally admitted. There was too much work to be done to permit such frequent celebrations. For a time even Christmas was no holiday; one day in seven was all they could spare.

Even the great power of ecclesiastical and theological sanctions proved unable to maintain this rigorous discipline for more than a few generations. The city churches gradually relaxed from the gospel of work which they had been preaching during these generations of strenuous building, and became acclimated to the habits of luxury and leisure which grew up in the cities when commerce became very profitable. Thus the churches of the rural frontier early became the strongholds of orthodoxy and the upholders of puritan morals. That was precisely what was taking place during Franklin's life-time. Certain classes were already willing to rest on their oars, — or rather on the oars of their

grandfathers. The atmosphere of work gave way to the atmosphere of "having arrived." The chief city churches became "fashionable," and their clergy degenerated into a disputatious crowd of "theocrats." The preaching of Jonathan Edwards and the "great awakening" had proved but a temporary and ineffective substitute for the old moral discipline, and finally the inroads of Socinianism, Antinomianism, Anglicanism, and even Deism were threatening to break up the moral and religious asperity of New England.

In this situation Benjamin Franklin made the attempt to maintain the Puritan virtues in all their rigour, but abandon entirely their theological sanctions. He placed the frontier morality on a utilitarian footing, and gave it empirical sanctions. In this he was eminently successful. Franklin put the whole matter in a few words: "Revelation had indeed no weight with me, as such; but I entertained an opinion, that, though certain actions might not be bad, *because* they were forbidden by it, or good, *because* it commanded them; yet probably these actions might be forbidden *because* they were bad for us, or commanded *because* they were beneficial to us, in their own natures, all the circumstances of things considered."[7] All that remained to be said was simply what Franklin did say over again: If you want to achieve any thing, these are the necessary means: temperance, silence, order, resolution, frugality, industry, sincerity, justice, etc. And if one were to ask for proof, Franklin could point to his own experience and to the colonies themselves as evidence.

Philosophers are offended by the simplicity, almost simpleness, of this philosophy. Surely there can be nothing profound in a doctrine which a Pennsylvania farmer could understand. Though more recent instrumentalists have

[7] *Autobiography.*

succeeded in putting this doctrine in language which appeals more to "university men, and generally men of all sorts that have been bred at Edinburgh," there really seems little more to say on the subject than Franklin said. Any analysis of intelligence, or in more technical language, any instrumentalist ethics, will prove, it seems to me, the validity of Franklin's contentions, and though it may be more systematically developed and more elaborately conceived, the implications for conduct will be substantially the same. From a practical stand-point, Franklin's concrete analysis of intelligence in terms of virtues and vices seems more illuminating than the formal and psychological analysis found in recent philosophy. Certainly no method of presentation of utilitarian ethics could have been more effective than Franklin's, for he is to this day the patron saint of all those who are interested in achievement.

Franklin's mind is typical of an easy, spontaneous hospitality to ends or ideals, and of an intellectual preoccupation with their practical challenge. Pennsylvania needed fortification against the French and Indians; Franklin began at once to work on plans for organizing a militia and buying cannon. In view of their common interests against Great Britain, the colonies wanted some sort of union; Franklin immediately proposed a plan. Throughout his life, he was continually proposing plans, — a plan for the promotion of abolition of slavery, a plan for improving the condition of free blacks, a plan for bringing the comforts of civilization to the natives of New Zealand. The "art of virtue" was simply one more *plan*. *Any* end, suggested to his mind, immediately raised the problem of its accomplishment. He even told the great evangelist, George Whitefield, how he could most easily convert great numbers of people, advising him to convert a few popular leaders, "grandees," first and then the

masses would follow. "For," said he, "men fear less the being in hell than out of fashion."[8] In his scientific researches, too, practical problems seemed to stimulate him most. I do not mean practical applications like the lightening rod, for these were of minor concern to him, but rather problems of designing apparatus, of experimental conditions for testing hypotheses, and of methods for dealing pragmatically with rival hypotheses. His inventions are further evidence of this habit of mind, — an improved harmonica of vibrating glasses, bi-focal spectacles, smokeless fireplaces, to say nothing of his electrical devices. It would be difficult to find a mind more given to free play in the objects of its interests, yet more intent on their practical aspects. In this preoccupation with instrumental values, Franklin is typical of what Europeans call "Americanism." Final values, being taken for granted, seldom become consciously defined and discussed, for in America (and elsewhere too for that matter) ends are adopted early and easily, much as religions are adopted by children; they are taken for granted as part of the intellectual environment and there seldom arises an occasion for criticising them seriously. This is not because final values and ends are fixed and certain. In fact there is little order, consistency, or stability about them. Royce's Philosophy of Loyalty is typical: causes are many, but loyalty is one; loyalty is the precious pearl, the cause it serves is incidental. An American may identify himself with almost any cause that is fashionable, but he takes it very seriously and his intellectual life centers about the practical problems involved. Ends always have their immediate practical reference. To examine them apart and "see them in the sky," as it were, requires a Greek, not an American education.

8 *Works*, (Bigelow), vol. II, p. 151.

Consequently the objection usually made to Franklin's moral philosophy, and for that matter to any other utilitarian ethics, is that it is merely instrumental; that it converts means into ends. "You tell us," the criticism runs, "the 'Way to Wealth,' but you fail to tell us whether or not wealth is a good. You tell us how to succeed in business, but you fail to tell us whether or not our business is worth while." The more superficial critics of Franklin, (to say nothing of the critics of utilitarianism and pragmatism) immediately infer that "material prosperity" is the admitted end. To them Franklin is merely a typical American business man who, without stopping to evaluate, simply adopts the business principles of thrift for thrift's sake, money for money's sake, the more the better. That this is not true of Franklin's personal life is easily proved. As soon as he became "free and easy" he quit his business and devoted himself to science, literature, public affairs, and conversation with his friends, — pursuits which from boyhood up had been his chief delight. As early as 1748 he wrote to Cadwallader Colden: "I am in a fair way of having no other tasks than such as I shall like to give myself, and of enjoying what I look upon as a great happiness, leisure to read, study, make experiments, and converse at large with such ingenious and worthy men as are pleased to honor me with their friendship or acquaintance, on such points as may produce something for the common benefit of mankind, uninterrupted by the little cares and fatigues of business."[9] And a year later he wrote to his mother: "At present I pass my time agreeably enough. I enjoy, through mercy, a tolerable share of health. I read a great deal, ride a little, do a little business for myself, now and then for others, retire when I can, and go into company when I please; so the years roll round, and the last will

9 *Works*, (Bigelow), vol. II, p. 115.

come, when I would rather have it said, *He lived usefully*, than *He died rich.*'' [10]

A further example of this attitude is found in his speculations on ''raising a United Party for Virtue.'' The successful demonstration of his ''Art of Virtue'' on himself suggested to him the possibilities of its social and political application. Members of this ''United Party,'' ''good and wise men'' of all nations, were to discipline themselves in accordance with the program Franklin had earlier followed himself. They were to be called '' 'The Society of the Free and Easy.' Free, as being, by the general practice and habits of the virtues, free from the dominion of vice; and particularly, by the practice of industry and frugality, free from debt, which exposes a man to constraint, and a species of slavery to his creditors.'' [11]

In his philosophy as well as in his personal life, therefore, a sense of values is evident, values of which he did not lose sight, and in the service of which his moral philosophy was merely and precisely an instrument. Franklin was not interested in establishing his puritanic discipline as an end in itself. He assumed that people have ends, that they want to be ''free and easy,'' and that they understand wealth as merely the necessary means for enjoying the real ends of leisure society. The reason ''wealth'' and similar terms figure so largely in Franklin's writings was simply that the people for whom he was writing thought in those terms. Any term which symbolized the ends for which people actually were striving was welcome to Franklin. He made no attempt to prescribe the ends which men should follow. His point of view is this: ''If you have an end in view, I am interested in discussing with you the necessary steps to gain it.''

10 *Ibid.*, p. 155.
11 *Autobiography.*

To discuss means is as legitimate in moral philosophy as to discuss ends. Criticism of Franklin and the instrumentalists for not doing both is out of place. The attention of Franklin was as consistently confined to the concrete analysis of means, as the attention of the Greeks to ends. Aristotle simply made explicit what any Greek would have admitted to be a life well lived. The greatness of his Ethics rests on the fact that no one has ever improved on his simple, matter-of-fact analysis of the ideal ends of human life. The Greek virtues, — balance, wisdom, beauty, and the rest, — are ends, not means. Franklin's virtues, — frugality, industry, sincerity, honesty, and the rest, — are means, not ends. It was the glory of the Greeks that they persisted in painting perfection in the face of practically minded objectors, with their, "But how is this possible in a barbarian world?" It was the greatness of Franklin on the other hand, that he refused to abandon his puritanic principles because they were disagreeable. The contemporary decline of Puritan morals symbolizes less a growing tolerance of natural goods, or a discovery of better methods of attaining them, than merely our impatience at being obliged to work for them. Contemporary philosophers apparently are more preoccupied with the problem of devoting wealth to wise ends than with the problem of gaining it; and this is probably a good sign. But it is good only in so far as it means that we take for granted the truth of the puritan morals of discipline, and proceed, like the Greeks, to the final problems of art and beauty. There seems to be, however, an influential current of opinion that the validity of any ethics of discipline has been disproved, and that life can be lived on the principle of romantic freedom.[12] But the freedom, leisure and beauty which we

12 Mr. D. H. Lawrence, in his *Studies in Classic American Literature*, is a case in point. His criticism of Franklin's table of virtues rests entirely on his presupposition that they are final, not instrumental virtues. If they

enjoy are obviously the fruit of generations of discipline and even of slavery, and though the industrial revolution has no doubt enabled us to be somewhat less preoccupied with the instrumental processes of life, it will take more radical inventions to rob life of its disciplinary side entirely. We do well to point out the slavishness of those puritans who make discipline an end instead of a means, but we are in danger of being accused of folly in imagining that we can achieve beauty without discipline. The Greeks took slavery for granted. We too would be nearer the facts of modern life if we took slavery for granted, than we are when we imagine that puritan virtues are antiquated. Franklin's ethics is still consistent with human experience.

are taken as the ends of life, they are easily satirized. Mr. Lawrence himself seems to fall into the trap which he lays for Franklin in that he tries to re-define these purely disciplinary virtues in such a way as to give them ideal content. The result is even more ridiculous than it is intended to be. Justice, for example, he re-defines as follows: "The only justice is to follow the sincere intuition of the soul, angry or gentle. Anger is just, and pity is just, but judgment is never just." (p. 26) This is obviously no definition of justice at all. It may be a definition of freedom. Mr. Lawrence is so preoccupied with the praise of freedom, of individuality, of mastery, of imagination, of his gods, — in short, of the ideal or final values of life, that it never occurs to him that Franklin could be talking about something quite different. Franklin's table of virtues is not a catalogue of his ideals or objects of worship, and to attempt to read ideal content into them is Mr. Lawrence's, not Franklin's mistake. Franklin was just as much interested in being "free and easy" as Mr. Lawrence is — more so, in fact, for he was willing to work towards it, whereas Mr. Lawrence will probably spend his whole life merely fretting and fuming about it. No one can blame Mr. Lawrence for protesting against the popular confusion of means and ends, and the general tendency to make God an "everlasting Wanamaker," but his reading this into Franklin himself is not excusable. Mr. Lawrence seems to have a fairly keen appreciation of ideals, but none whatsoever of morals; Franklin had some of both. "Early to bed and early to rise, makes a man healthy, wealthy and wise." Health, wealth and wisdom, is not a bad summary of the natural goods of human life. But none of them occur in Franklin's table of virtues; it is concerned exclusively with the "early to bed and early to rise" side of life. Mr. Lawrence has no room for this instrumental side of life in his philosophy, but one suspects that even he, as a matter of practice, must apply considerable "resolution, frugality, industry and sincerity" to the writing of his books, though such virtues as "temperance, silence and order" evidently appear further down on his list.

If one really wants to achieve an end, whatever it may be, from selling soap to composing symphonies, one follows Franklin's advice if one is wise. That is as universal in human experience as is the Greek ideal. The truth of it is as old as history and quite proverbial. It is obvious that the wisdom embodied in this philosophy was understood long before Franklin, but seldom has it been stated so concretely, so simply, and so empirically.

In other words, Franklin's table of virtues, inasmuch as it is not a philosophy of human ideals, is to be regarded neither as a substitute for the Aristotelian Ethics, nor as a glorification of bourgeois commercialism in the face of the chivalry of the feudal aristocracy. If the Franklin morality substitutes for anything it is for the traditional "Christian" virtues, for they, too, constitute a philosophy of the discipline of life. The Christian life, is traditionally portrayed as one of humility, charity, penitence, poverty, self-denial, a forgiving spirit. These are obviously instrumental virtues and not ideal perfections. This traditional code of the feudal ages proved ill adapted to the pioneer life of New England.[13] Consequently the Puritan virtues, in spite of the fact that they were sanctioned by a Christian theology, were not traditionally Christian. This divorce from the Christian moral tradition, which Franklin made explicit in his philosophy, is quite generally recognized. The contrast between the Yankee and the Christian types of character is familiar enough. The two philosophies involved are practical alternatives. Even though the dominance of the Christian analysis during the feudal age be admitted, the Franklin analysis certainly seems to have more practical influence in our modern "progressive" society. Which of them will prove eventually to be a more profound

[13] Franklin, in his *Autobiography*, explicitly retracts humility, the chief of the "Christian" virtues, as impractical.

analysis of the practical aspects of human life perhaps still remains to be seen.

But in the meantime it is philosophically highly important to keep means and ends distinguished. An ethics of ends, such as the Greek ethics, and an ethics of means, such as Franklin's, are both intellectually legitimate and practically significant, but most moralists either confuse the distinction or, adopting one of them, deny the validity of the other. Royce has already been mentioned as one of the former type. He begins by emphasizing the instrumental importance and practical value of loyalty, and he ends by making it *the* end or "cause" which all loyalty must serve. It makes a great difference whether we regard duty, with Kant, as something intrinsically beautiful, or with Hobbes as something fundamentally useful. Indeed one can scarcely exaggerate the importance of submitting the traditional catalogues of virtues and of ideals to this test, not with the intent of separating the sheep from the goats, — the good from the bad — for a means is presumably as good as an end, but for the purpose of defining the status and function of each. It is idle to condemn a thing because it is merely useful, or to exalt a thing because it is pure beauty; but it is important to be able to distinguish the beauty and the utility of things. In heaven, perhaps, all things will be both useful and beautiful, and much may be said for encouraging such a state of affairs on earth, but even in heaven a man will make a fool of himself if he confuses the beauty of his wings with their utility. To be able to distinguish between beauty and utility is the essence of wisdom, and it ill becomes a moral philosopher to be unable to distinguish the instrumental virtues and the intrinsic excellencies of conduct.

As to the other type of moralists, those who are champions either of ends or of means, but are unable to honor

both, the real point at issue seems to be whether it is morally more important to define and defend one's ideals, or to take ideals for granted and enquire into the means by which they may be realized. In this abstract and absolute form the problem is as unanswerable as it is unreal. It is obvious that an exclusive devotion to either spells disaster; while the Greeks were contemplating the ideal city their actual cities were being destroyed by barbarians, and today barbarians are destroying their own cities because they have no vision of the ideal city. However, as a specific question relative to a given situation, it is real, but then it is the situation itself that determines the answer. Thus the time and circumstances in which Franklin lived, as I said above, made the problem of means exceedingly urgent; the ends were fairly obvious. At another time and under other circumstances the wisdom of Franklin might be taken for granted and criticism devoted to ends. There is, however, something in general to be said from a philosophic and scientific point of view, in favor of Franklin's emphasis. On the whole, ends are particular and means universal.[14] Ends are as specific and as various as human beings themselves. It would therefore seem *a priori*, that an ethics which attempts to formulate ends would have before it an interminable task. Beauty is notoriously elusive, and he who thinks he has captured beauty in its final form, usually finds few who agree with him. Philosophers or scientists can therefore not afford to lay down absolute ends, nor can they hope to rob ends of their essential individuality. But in the realm of means, they have more reason to rely on universal rules. Nature is fairly stable and the fundamental physical conditions of life fairly uniform. The uniformity of nature and the discovery of causal relations make knowledge possible, and it is these very cau-

14 *Cf.* John Dewey in the Carus Lectures, 1922.

sal relations which when harnessed to ends, become means. This universality of means, therefore, makes it possible for an ethics of means to be scientific. Its hypothetic form is indicative of its scientific character. It does not dictate, it advises. It does not say, "thou shalt and thou shalt not." It says, "*if* you would be healthy, wealthy and wise, you must go early to bed and be early to rise; *if* you would be free and easy you must cultivate the art of virtue; etc." Judgments in this form are about matters of fact and can be put to empirical tests. Not being bound to a particular set of standards, such an inquiry can discover the physical conditions of any. An ethics of means is, therefore, akin to the sciences, and an ethics of ends to the arts. We are all artists, each engaged in his own individual work of beauty, but the instruments with which we ply our arts may be common. Or, in Franklin's own terms, the "art of virtue" may be useful to any one for whom life is an art.

WILLIAM JAMES AND PANPSYCHISM

WENDELL T. BUSH

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In the memory of those who knew him and in the thoughts of many who did not, the name of William James persists as the name of a leader of intellectual life in America, in its larger philosophical and imaginative form. To him is usually given the credit of teaching all of us the lessons and the renunciations of empiricism. But James's empiricism was full of imagination and of metaphysical reminiscence, full of poetic spontaneity, of religious devoutness and of concessions to human expectations. So that in the end a critic might say that his empiricism left much to be desired.[1] But James was certainly a prophet of empiricism; he pointed the way to this generation of philosophers and psychologists. Yet like prophets, he saw many things in a vision, a vision, perhaps, more of symbols than of such realities as science can adopt into its subject matter. An empiricist to-day is expected to represent what we call naturalism, with little patience for what James called "tender-minded" philosophy. But James seemed a little afraid of naturalism, and he was candidly and outspokenly a supernaturalist. I feel that no excuse is needed for quoting any of James's eloquent and sincere utterances. This was his reaction to naturalism, as he understood the word: "For naturalism, fed on recent cosmological speculations, mankind is in a position similar to that of a set of people living on a frozen lake, surrounded by cliffs over

1 I venture to refer to my review of *Essays in Radical Empiricism*, with the title "The Empiricism of James," *Journal of Philosophy*, Vol. X, p. 533.

which there is no escape, yet knowing that little by little the ice is melting, and the inevitable day drawing near when the last film of it will disappear, and to be drowned ignominiously will be the human creature's portion. The merrier the skating, the warmer and more sparkling the sun by day, and the ruddier the bonfires at night, the more poignant the sadness with which one must take in the meaning of the total situation.'' [2] To-day people are learning more and more to substitute a hope of social future and progress for that of personal immortality, but James, as so many of his writings show, cherished the older sentiment. Life for him was so personal, so intimate, and personality seemed to him so unique a value, that if nature was not somehow metaphysically on its side it seemed to him that one could not without poignant sadness ''take in the meaning of the total situation.'' And in the case of so sensitive and so human a philosopher this was not likely to be without influence on some of his theories.

One can not mention the empiricism of James without being reminded of the concept which he called ''radical empiricism.'' Even about this idea, in which he took so much interest, and which was so considerable a contribution to philosophy not many years ago, James has made seemingly contradictory statements. The term ''radical empiricism,'' suggests, of course, the question, What then is orthodox or conservative empiricism? Conservative empiricism was the empiricism of Hume and the British tradition — the empiricism so laboriously reviewed by Green in his famous ''Introduction.'' Green, and other idealists after him, had taken advantage of one inaccuracy or oversight on Hume's part, indicated by such a statement as this: ''In short there are two principles which I can not render consistent, nor is it in my power to renounce either of

2 *The Varieties of Religious Experience*, p. 141.

them, *viz.* that all our distinct perceptions are distinct existences, and that the mind never perceives any real connection among distinct existences'' (Hume's *Treatise*, Selby-Bigge, p. 636). It follows, on Hume's ground, that ideas of relation connecting distinct existences can not be empirically accounted for, and accordingly the discovery of a system of nature points, it was argued by the devout, to some transcendental, relating power. And Green ends the ''Introduction'' as follows: ''Having learnt, through the discipline which Hume himself furnishes, that the recognition of a system of nature logically carries with it that of a self-conscious subject, in relation to which alone 'different perceptions' become a system of nature, we know that we can not naturalise the 'human mind' without presupposing that which is neither nature nor natural, though apart from it nature would not be — that of which the designation as 'mind,' as 'human,' as 'personal,' is of secondary importance, but which is eternal, self-determined, and thinks.'' This seems to have been the situation which generated the concept called ''radical empiricism'' in the sense James gives to it when he defines it in empirical language, as for instance on pages 279-280 of *A Pluralistic Universe*. After protesting against ''intellectualist'' methods, and saying ''the atomic and unrelated sensations which he [Green] had in mind were purely fictitious products of his rationalist fancy,'' James continues: ''Every examiner of the sensible life *in concreto* must see that relations of every sort, of time, space, difference, likeness, change, rate, cause, or what not, are just as integral members of the sensational flux as terms are, and that conjunctive relations are just as true members of the flux as disjunctive relations are. This is what in some recent writings of mine I have called the 'radically empiricist' doctrine (in distinction from the doctrine of mental atoms

which the name empiricism so often suggests). Intellectualistic critics of sensation insist that sensations are disjoined only. Radical empiricism insists that conjunctions between them are just as immediately given as disjuntions are and that relations, whether disjunctive or conjunctive, are in their original sensible givenness just as fleeting and momentary (in Green's words), and just as 'particular' as terms are."

This is candid empiricism, and it is, on the whole what we must understand the term radical empiricism to mean. Yet on page 35 of the same book James calls radical empiricism a sub-species of pantheism. According to this statement it differs from monistic idealism only in being pluralistic.

Those who have looked upon James as the great teacher of empiricism have, perhaps, simply ignored the passages like this one. But James claimed repeatedly that empiricism ought to be on the side of religion, meaning on the side of supernaturalism. "Let empiricism once become associated with religion, as hitherto, through some strange misunderstanding, it has been associated with irreligion, and I believe that a new era of religion as well as of philosophy will be ready to begin. That great awakening of a new popular interest in philosophy, which is so striking a phenomenon at the present day in all countries, is undoubtedly due in part to religious demands. As the authority of past tradition tends more and more to crumble, men naturally turn a wistful ear to the authority of reason or to the evidence of present fact. They will assuredly not be disappointed if they open their minds to what the thicker and more radical empiricism has to say. I fully believe that such an empiricism is a more natural ally than dialectics ever were, or can be, of the religious life." And on page 313: "If Oxford men could be ignorant of anything,

it might almost seem that they had remained ignorant of the great empirical movement towards a pluralistic panpsychic view of the universe, into which our own generation has been drawn, and which threatens to short-circuit their methods entirely and become their religious rival unless they are willing to make themselves its allies.'' And again (p. 309): ''In spite of rationalism's disdain for the particular, the personal, and the unwholesome, the drift of all the evidence we have seems to me to sweep us very strongly towards the belief in some form of superhuman life with which we may, unknown to ourselves, be co-conscious. We may be in the universe as dogs and cats are in our libraries, seeing the books and hearing the conversation, but having no inkling of the meaning of it all. The intellectualist objections to this fall away when the authority of intellectualist logic is undermined by criticism, and then the positive empirical evidence remains. The analogies with ordinary psychology and with the facts of pathology, with those of psychical research, so called, and with those of religious experience, establish, when taken together, a decidedly *formidable* probability in favor of a general view of the world almost identical with Fechner's. The outlines of the superhuman consciousness must remain, however, very vague, and the number of functionally distinct 'selves' it comports and carries has to be left entirely problematic.'' And after resuming the features of idealism that he seeks to defend himself against, he observes: ''The only way of escape, I say, from all this is to be frankly pluralistic and assume that the superhuman consciousness, however vast it may be, has itself an external environment, and consequently is finite.'' (*Loc. cit.*, pp. 310-11.)

It would seem that radical empiricism, in spite of its identification as a sub-species of pantheism, is a relatively small part of empiricism not so radical, and formulated

for a particular dialectical purpose. Just how much the less radical empiricism in general was supposed to cover, it is a little hard to say; evidently a great deal more than can be put forward as scientific evidence, since it takes in, presumably, all those private and partially inarticulate experiences that James describes so sympathetically as cases of mysticism. The great range of empiricism in James's mind, the variety of things that could be pronounced empirical, must have some relation to his curiosity concerning what most of us pronounce quite unempirical objects — realities behind the veil or below the threshold, or embraced in the larger and truer self (not the Absolute) of which we are temporary manifestations. About these things James never claims assurance of the scientific sort, but he repeatedly assures us of his own faith in them, a personal conviction, we should remember, based upon a very wide acquaintance with curious phenomena. "There are resources in us that naturalism with its literal and legal virtues never recks of, possibilities that take our breath away, of another kind of happiness and power, based on giving up our own will and letting something higher work for us, and these seem to show a world wider than either physics or philistine ethics can imagine" (*A Pluralistic Universe*, p. 305).

A little blind, but characteristic, is the following passage (Essays in Radical Empiricism, pp. 88-89): "In this sense [a sense provided by those "relations of continuous transition" that make our experiences cognitive] we can continue to believe in an existing *beyond*. It is only in special cases that our confident rush forward gets rebuked. The beyond must, of course, always in our philosophy be itself of an experiential nature. If not a future experience of our own or a present one of our neighbor, it must be a thing in itself in Dr. Prince's and Professor Strong's sense

of the term — that is, it must be an experience for itself whose relation to other things we translate into the action of molecules, ether-waves, or whatever else the physical symbols may be. This opens the chapter of the relations of radical empiricism to panpsychism, into which I can not enter now."

And on page 188: "But so far am I from suggesting any definitive answer to such questions, that I hardly yet can put them clearly. They lead, however, into that region of panpsychic and ontologic speculation of which Professors Bergson and Strong have lately enlarged the literature in so able and interesting a way. The results of these authors seem in many respects dissimilar, and I understand them as yet but imperfectly; but I cannot help suspecting that the direction of their work is very promising, and that they have the hunter's instinct for the fruitful trails." We are not likely to forget that James sought for pluralism, novelty and indeterminism, but he assures us repeatedly that he sought some form of theism too.

And this from the *Varieties of Religious Experience* (pp. 387-88): "Some years ago I myself made some observations on this aspect of nitrous oxide intoxication, and reported them in print. One conclusion was forced upon my mind at that time, and my impression of its truth has ever since remained unshaken. It is that our normal waking consciousness, rational consciousness as we call it, is but one special type of consciousness, whilst all about it, parted from it by the filmiest of screens, there lie potential forms of consciousness entirely different. We may go through life without suspecting their existence; but apply the requisite stimulus, and at a touch they are there in all their completeness, definite types of mentality which probably somewhere have their field of application and adaptation. No account of the universe in its totality can be

final which leaves these other forms of consciousness quite disregarded. How to regard them is the question — for they are so discontinuous with ordinary consciousness. Yet they may determine attitudes though they can not furnish formulas, and open a region though they fail to give a map. At any rate, they forbid a premature closing of our accounts with reality. Looking back on my own experiences, they all converge towards a kind of insight to which I can not help ascribing some metaphysical significance.''

The reader interested in this aspect of James's philosophy should reread the lecture on *Human Immortality* and especially that part of it where James contrasts the ''production theory'' of consciousness with the ''transmission theory'' and claims that the latter is as justified as the former. Here, as elsewhere, much is made of the theory of a ''threshold,'' a theory in which James had the deepest confidence and which he regarded as having the greatest importance for psychology. Along with this notion of the threshold goes James's interest in the work of Frederic Myers and in the latter's notion of the ''subliminal self.'' James is always good to quote, whether one agrees or not, but these citations must come to an end. Nevertheless I must offer one or two more, the first from ''Final Impressions of a Psychical Researcher'' (*Memories and Studies,* p. 204): ''Out of my experience, such as it is (and it is limited enough) one fixed conclusion dogmatically emerges, and that is this, that we with our lives are like islands in the sea, or like trees in the forest. The maple and the pine may whisper to each other with their leaves, and Connecticut and Newport hear each other's fog-horns. But the trees also commingle their roots in the darkness underground, and the islands also hang together through the ocean's bottom. Just so there is a continuum of cosmic consciousness, against which our several minds plunge as

into a mother-sea or reservoir. Our "normal" consciousness is circumscribed for adaptation to our external earthly environment, but the fence is weak in spots, and fitful influences from beyond leak in, showing the otherwise unverifiable common connection. Not only psychic research, but metaphysical philosophy, and speculative biology are led in their own ways to look with favor on some such "panpsychic" view of the universe as this. Assuming this common reservoir of consciousness to exist, this bank upon which we all draw, and in which so many of earth's memories must in some way be stored, or mediums would not get at them as they do, the question is, What is its own structure? What is its inner topography? This question, first squarely formulated by Myers, deserves to be called "Myers' problem" by scientific men hereafter. What are the conditions of individuation or insulation in this mother-sea? The metaphor of the sea seemed to James a good one. "We need only suppose the continuity of our consciousness with a mother-sea, to allow for exceptional waves pouring over the dam. Of course the causes of these odd lowerings of the brain's threshold still remain a mystery on any terms" (*Human Immortality*, p. 27).

Readers of James will remember his chapter (in *A Pluralistic Universe*) on the compounding of consciousness. We are so familiar with his bias against idealism, that his criticism of the theory of compounding individual minds to produce the Absolute reads easily and naturally. But I confess to surprise when I read (p. 197) that James felt resentful and envious. "Envious because in the bottom of my heart I wanted the same freedom [with logic] myself, for motives which I shall develop later." James does not, I think, explain these motives so clearly as one might wish, but on pages 206-7 we have the following: "I said awhile ago that I was envious of Fechner and the other pan-

theists because I myself wanted the same freedom that I saw them uscrupulously enjoying, of letting mental fields compound themselves and so make the universe more continuous, but that my conscience held me prisoner. In my heart of hearts, however, I knew that my situation was absurd and could be only provisional. That secret of a continuous life which the universe knows by heart and acts on every instant can not be a contradiction incarnate. If logic says it is one, so much the worse for logic. Logic being the lesser thing, the static incomplete abstraction, must succumb to reality, not reality to logic. Our intelligence can not wall itself up alive, like a pupa in its chrysalis. It must at any cost keep on speaking terms with the universe that engendered it. Fechner, Royce and Hegel seem on the truer path. . . . Sincerely, and patiently as I could, I struggled with the problem for years, covering hundreds of sheets of paper with notes and memoranda and discussions with myself over the difficulty. How can many consciousnesses be at the same time one consciousness? How can one and the same identical fact experience itself so diversely?''

James's chapter on the compounding of consciousness looks back to the chapter on the mind-stuff theory in the *Psychology*. James rejects the mind-stuff theory because it ''is the theory that our mental states are compounds, expressed in its most radical form'' (Vol. I, p. 145). And he rejects the theory without compromise, because it seems logically self-contradictory. Nevertheless, the continuity demanded by the theory of evolution required that ''consciousness in some shape must have been present at the very origin of things'' (l.c., p. 149). If we start with an atomic mind-stuff theory, how can the ''mind-stuff'' elements logically summate themselves into experiences of continuity? Or if we start with the ''mother sea'' how

can it logically resolve itself into the discreteness of distinct personalities? Or, as phrased in the above passage from *Human Immortality*, "What are the conditions of individuation or insulation in this mother-sea?" And whatever the physical conditions might be, their very possibility seemed to be denied by the logic of the question itself.

The result was that James, encouraged by Bergson, gave up logic "fairly, squarely and irrevocably" (*loc. cit.* p. 212). What James discovered seems obvious enough, *viz.* that logic is a formal science, a science of entirely hypothetical situations, and therefore not qualified to deliver discoveries of fact. James gave logic up, however, it would appear, because it seemed to deny to himself that relation of the many individuals whose conscious life is above the threshold to the mother sea of life, which he says clearly it denied to the idealists speaking a somewhat different language. A reader of James, the empiricist, is somewhat taken aback to find him saying that Royce and Hegel seem, after all, on the truer path. We can not say with entire confidence that this is how James came to "give up" logic, but there is much to suggest that it may have been so, for it was what he had to do "in this tragic predicament."

It is unfortunate that James explains this episode in his philosophical experience in a course of popular lectures. The subject demanded more technical pains and more time. But that ideas of panpsychism were a long time with him, one is forced to believe, and this fact may help us to understand his concept of "pure experience." For pure experience is not the principle of empiricism as generally understood, but it is, apparently the doctrine assumed in the essay, "Does Consciousness Exist?" Pure Experience is *a materia prima* prior to both thought and things, and, one must suppose, existentially more fundamental. It is in-

articulate as mysticism tends to be, and as it must be since it can not be subject to the categories of either thoughts or things.

James's pronouncements on pansychism are scattered, tentative and metaphorical — but full of personal confidence. It is a pity, from the point of view of literature, that he never gave a complete and systematic expression of his views, for it would have been so imaginative and so human a document.

UNWRITTEN PHILOSOPHIES

HELEN HUSS PARKHURST

UNWRITTEN PHILOSOPHIES

Helen Huss Parkhurst

Numerous as are the philosophies which have at one time or another been believed by somebody, their number is small compared with the number of those doctrines which have never been believed, — which have never even been thought of. Of the written philosophies, all of them honored by the approval of at least one human mind, — that of their author, — there has been no lack of account taken. Our libraries are full of the histories of such beliefs. Endless years of research by endless researchers have been devoted to the sorting out, classifying and evaluating of those particular doctrines which happen to have been discovered. Probably none of the historians would claim that the authors of these doctrines were for the most part notable for any other reason than that they were the authors. Indeed it is pretty plain that at least from a philosophic standpoint their distinction is an acquired distinction, derived by reflection from their works. But while philosophers themselves are thus glorified by a light borrowed from their philosophic discoveries, it is hard to see how those discoveries are for their part in any wise enhanced by their chance association with the personalities of their discoverers. If a doctrine is interesting or true, how can it be added to by authorship? And if it is dull or false how can the fact that somebody has believed it confer upon it either truth or interest? Indeed, other things being equal, it would seem that a philosophic idea that had never been appropriated would possess an interest, a freshness, a

free uncontaminated quality absent from an idea that had acquired an historical mooring in time and place by association with some believer in it.

Actually, of course, the emphasis is always the other way about. Historians of philosophy are forever trying to determine whether some particular doctrine was believed by some particular person, and when, and why, and for how long. We seldom contemplate a philosophic idea without being quite careful to learn who first promulgated it, and exactly who else have honored it with their acceptance. There is no doubt about it, the written philosophies have heretofore cast the unwritten quite into the shade. And yet a person of unbiased opinion would scarcely venture to assert that it has been without exception the most significant of possible philosophies that have been exploited, and without exception the insignificant that have remained unknown. The chances indeed seem to be that the majority of recorded philosophic ideas are quite false; and a goodly number appear to be relatively unimportant. Considering the discrepancy in number between the written and the unwritten philosophies, the probability would be that the majority not only of the true but also of the really remarkable are among the unwritten. But of these, rather strangely, no serious account has ever been taken. As far as scholarly research is concerned, that great and noble body of ideas has been uniformly ignored. No one with a passion or talent for historical study has ever considered for a moment compiling a compendium or even instituting a preliminary investigation of those twice neglected doctrines, — the never criticized, — the never recorded and the never pioneer work in a offer such unexampled opportunity for ground for some virgin field. In the way of breaking important task the future worker better fitted for this impo. following reflections are indulged in.

As we take our first survey of the route of our contemplated excursion we may well be appalled and question whether a tour of such magnitude can allow of any intelligent observations by the way. Ask any historian of recorded philosophy what he could hope to tell about "philosophies in general" in a single study. And yet the philosophies with which he would be concerned would constitute but a handful of islands scattered over the vast sea of potential philosophy which is our present interest. In the face of the danger of becoming completely lost let us get our bearings by considering a few important facts about the charted regions of that sea.

It may be noted in the first place that there are three grades of philosophic system: the highest grade being that of systems proper, of which the parts are not only compatible but mutually implicatory; the lowest grade, that of philosophies whose parts are actually warring elements, inconsistent with one another; and intermediate between these two, the grade of those groups of elements which without being incompatible are joined together by no rigorous logical necessity. The first grade is that of the type of ideal system, and is seldom exemplified. Very simple philosophies, or very mathematical ones come closest to realizing the ideal. The lowest grade one might expect not to find exemplified at all, although if the arraignment by philosophers of one another's works carries any weight one is obliged to infer that internally disrupted philosophies are of very frequent occurrence. The intermediate grade is perhaps the one most commonly met with, allowing as it does for the inclusion of a wide range of concepts and the exploiting of many and varied interests. But probably few actual philosophic systems illustrate any one type to the total exclusion of the other types. They are usually of mixed composition, exhibiting in spots the ideal of high

integration and elsewhere being composed of loosely aggregated elements in the midst of which lurk incompatibles. Take the outstanding ideas in the writings of Schopenhauer, for example: that the phenomenal world is in evolution; that existence is evil; that striving is omnipresent; that the will is the basic reality; that woman is incalculably inferior to man; that time, space and the categories are subjective; that self-sufficiency is the key to contentment; that the state of knowing that is pure (that is, freed from the principle of sufficient reason) is blessed; that art mediates this state. Here, obviously, we have a mixed system. Voluntarism and anti-feminism neither imply one another nor do they conflict; subjectivism and evolutionism are at least apparently irreconcilable viewpoints; while pessimism and stoicism might to some degree at least be called logical implicates of one another. Or take again the philosophy of William James with its denial of the extra-experiential; its cordiality to mysticism; and its insistence on the freedom of the will, the relativity of truth, the plurality and independence of the ultimate constituents of the universe, the value and efficacy of belief, the reality of change, and the priority of practical and emotional interests. Truly a varied and interesting assortment.

And now for the matter of the components of systems.

The indivisible brick for the building of thought is the concept, and it might seem as though, after first listing all concepts, one could by means of their permutations and combinations automatically derive not only all actual philosophic systems but all possible ones as well. But the matter is not quite so sure and simple. There are two principal difficulties.

In the first place it may be questioned whether one could ever be certain that in any such enumeration all possible concepts had been included. And the answer comes at

once in the negative. The kind of synthetic process by which a new basic idea comes to birth is not apparently to be anticipated by any process of mere analysis. Suppose we took all the notions now current: the ultimate categories, — time, place, cause, motion, substance, relation and the rest; the basic concepts of ethics, esthetics, science, mathematics, — such concepts as form, weight, pleasure, good, intensity, equality, correlation; the generalizations from sensory experience, — tonality, brightness, pungency, roughness, redness, warmth, bitterness; and finally the abstractions that occur in pairs, — simplicity, complexity; absolute, relative; mutable, immutable; order, chaos; subjective, objective; mediate, immediate; static, dynamic; finite, infinite. From these old concepts, as far as one can see, could never be derived by inspection a hint of the utterly new concepts that may be developed in the future. But for the forecasting of the yet unwritten philosophies this may not be quite so serious as at first appears. How often does a new notion, — not a novel application of an old notion, but a totally new notion, — occur in human thinking? Very, very seldom, we must admit. Copernicus, — or more strictly, the Greeks who anticipated him, — revolutionized astronomy, but in his interpretation of the relation of earth and sun nothing more was needed than the old idea of motion, only instead of having the sun go round the earth, he put it the other way about. Or take the revolutionary pragmatic conception of truth. In terms of ultimate ideas, what does it do but employ the old and tried concepts of change, plurality, and relativity? Or as an extreme instance take Bergson's notion of a creative evolution which even by those who reject it would probably be ranked as highly novel. Does it call for any new categories? A somewhat complex integration of the familiar distinctions of inner *versus* outer, dynamic *versus* static,

intuitive *versus* rational, temporal *versus* spatial, novel *versus* repetitious, durational *versus* momentary, retentive, *versus* unretentive, appears to suffice to formulate the "new" idea. To the plea that the concept of a space of more than three dimensions and of positive or negative curvature must at least involve an unpredictable and genuinely synthetic process, it may likewise be said that since more than one dimension and a zero curvature was already involved in the space of Euclid, it is not far-fetched to call Riemannian, Lobaschevskian, and multi-dimensional varieties merely new combinations of already current notions.

It is conceivable then, though perhaps not probable, that as far as basic unit concepts are concerned we now possess not only all that ever will be used, nor even all that the human mind, by its intrinsic nature would be able to conceive, but even all that are objectively possible, in terms of any consciousness or any logic. If that should be the case, then of course one kind of limitation upon the prognostication of the undiscovered philosophic systems would be definitely removed.

There would however remain the other small complication. Purely mechanical permutations and combinations of the complete set of ultimate notions would not provide for those effects of light and shadow, due to differences of stress which are characteristic of the arrangement of elements within any actual philosophy. Even in a system whose parts are not so integrated as to be logically deducible from a single central doctrine, we usually find that some one or two important ideas function as a kind of core or point of reference of the members of the group, largely determining their arrangement, their order of priority, and their collective connotation. Once recognize that this is the case, however, and it should be easy not only to reconstruct *a priori* the framework of all the philosophies that

have ever been built on this plan, but even to foresee all similar possible philosophies, including both those that will be and those that never will be written. Exactly how numerous are the possibilities for these systems of the centralized type may not perhaps be at once apparent. We can of course say off-hand that there is no notion, edifying or unedifying, fundamental or trivial, which may not be seized upon by the philosopher and exalted to a position of unique eminence in his work. But we get a more concrete realization of what this means when we recognize that there are no less than three distinct pairs of judgment that may be passed upon ideas as a basis for their selection out of the vast fund of the totality of notions. It can be asserted of them that they are true or untrue; important or unimportant; pleasing or displeasing. By some it is contended that the ground for pronouncing a doctrine true is that we find it good; and that the only kind of importance we ever discover is importance in the way of personal gratification. But theoretically at least any proposition could be declared to be true, unimportant and unpleasant by one person, and false, important and pleasant by someone else. Recognizing then that in addition to selections based on emotional preference, there may be selections due to quite impersonal apprehensions of truth or importance, let us nevertheless simplify the matter somewhat by concerning ourselves primarily with those emphases that issue from an emotional bias.

Now there are just two kinds of such bias, exactly two sorts of ultimate evaluation. A person's primary reaction may be approval or disapproval: that is, he may derive his main philosophic impetus either from an antipathy or from a predilection. Which of these types of inspiration controls him will of course determine whether his philosophy is predominantly positive or predominantly negative,

— whether it is, as it were, convex or concave, self-contained and constructive; or parasitical and destructive. Now there is, as already observed, nothing which may not set up in the mind of a philosopher a violent attraction or an equally violent repulsion. One type of person is goaded to a frenzy of proselytizing zeal by the idea of oneness, another type is maddened to a dangerous fury by the same notion. Some people are sickened by the mere mention of freedom, purpose, or the soul; others are similarly affected by the thought of blind chance, purposelessness or mechanical law. Those who love diversity, or discontinuity, or the immutable are bound to despise uniformity, or continuity, or the changeful. To most philosophers the concept of material substance, or infinity, or causation is an irresistible challenge to battle or a rallying point for an immense jubilation. And even such peaceable-appearing epithets as intrinsic, potential, unreal, relative, simple, essential, universal, necessary, and indefinable may turn out at any moment to be the adequate signal for the most alarming and imposing offensive or defensive operations.

One of the more fruitful sources of positive or negative enthusiasm in philosophies heretofore promulgated have been doctrines regarding the source of knowledge or the faculty by which truth is attained. Think of the virulent attacks on intellectualism and anti-intellectualism; the impassioned defences of mysticism and anti-mysticism; the uncompromising rationalisms, and authoritarianisms and empiricisms and all the brands of their opposites. What a deprivation the philosophies of Hume, of Bacon, of Bergson, of Russell, and of James would suffer if they were shorn of any mention of the problem of knowledge. But there are many other problems quite as adapted as this one to occasion solemn denials and affirmations serving as the pivot of an entire system. And many are the philosophies which

seem almost adequately summed up in a single emphatic gesture that they contain in the way of an espousal, or a rejection. The metaphysics of those who have been notoriously despisers of life or its infatuated lovers are known to the world chiefly as pessimisms or optimisms. And, popularly at least, the fiery advocates of a god and his venomous opponents are famous or infamous by reason of that one article of belief or disbelief.

But the number of antipathies and predilections which have hitherto served as corner-stones of philosophic systems is inconsiderable compared with the abundance of those that have never yet been thus utilized. It may repay us to glance briefly at some of the hates and loves which are at the disposal of enterprizing thinkers of the future bent on achieving originality of cosmic speculation. Let us take in turn doctrines that are possible candidates for social and ethical philosophies; for cosmologies; and for logics.

As provocative of expression of ethical antipathies and predilections the two most significant questions ought to be: What great good does the world lack? What great evil does it now suffer from? These two questions are of course to a large degree merely the positive and negative formulation of the same query, but to a considerable extent also the reply to the one does not contain by implication the reply to the other. Now although theorists are far from having exhausted the possible diagnoses of the world for the determination of its chief disease or its main salvation, their output of varied and mutually contradictory theories has been considerable. We have been told that what is the matter with us is merely too much gregariousness, or too little; too much combativeness, or too little; too abundant a playfulness, or too deficient; too strong a tendency to form rigid habits, or too weak. The Nietz-

sches have enjoined us to develop egoism; the Buddhas and Christs have called altruism the one thing needful. The authoritarians have pleaded for obedience and submission of spirit; the followers of Prometheus have preached defiance and the spirit of rebellion. The Puritans have inveighed against the evils of license; the psycho-analysts against the evils of suppression. Advocates of this world have praised pagan joyousness; advocates of a life to come have urged present austerity. We have been variously admonished to be proud, and to be humble; to be rational, and to be super-rational; to live only in the passing moment and to ignore the present in an exclusive concern for eternity.

Many of the fanaticisms that have never developed are on the same order as the foregoing. Take the acquisitive instinct for example. There have been plenty who have decried it, but who has ever come out with the declaration that the only trouble with mankind is that its acquisitive instinct is in an infantile stage of development? that what is wanted is a really rigorous exercise of the sense of property literally from the cradle? The antithesis of the ideals of communism this would be, and a reversal of the present tendency in the world toward social groupings. For there would from the start be the utmost stress laid upon the distinction of *mine* and *thine*, private ownership of land would be not deplored as an evil but made compulsory *for everyone*, and every child would develop a sense of privacy and responsibility — and a regard for others' privacy — by becoming proprietor as early as possible of a small house of his own. There would be not as now a half-hearted tolerance of the collecting impulse which appears so early, but enthusiastic instruction in the possibilities for amassing treasure, and the joys of it, so that beginning with sea-shells and pebbles and silver paper balls the

way would be laid for a long train of developing acquisitive impulses that would later be directed to such things as Rembrandts and first editions. For as would be constantly taught, it is not spending but saving that makes misers; not the passions of the collector that are anti-social but those of the thwarted and inhibited collector.

Or consider the so-called parental instinct. Plato of course slurred it somewhat, and Freudians have emphasized the lurking dangers of its correlative, the filial instinct. But no one has ever concentrated his powers of hatred upon the project of proving that the root of all evil in the world, — all its maladjustments, all its neuroses, and the germ of all institutions which make for enslavement and oppression are to be traced to the group of feelings and impulses that we call collectively the parental. Nor again has there ever been any systematic attempt to show that charity, — St. Paul to the contrary — is the greatest of all sins? It has, to be sure, been remarked that "it is twice cursed," cursing "him that gives and him that takes." But it is a far cry from a passing witticism to a philosophy of life. The doctrine that charity is hateful yet awaits its prophet who will find in the supposed virtue the expression and the source of all vicious double standards, the matrix of the two-fold evil of servility and arrogance, and the first instigation to the distinction of master and slave with all its consequences in the obnoxious psychology of both slaves and masters. But *could* one prove any of this? you may ask. Would it be reasonable? Well, is the Oedipus complex a reasonable explanation of things? Or the tenets of the Puritan? Is it reasonable to rest man's whole hope of salvation upon the successful swallowing of the contents of any single book from cover to cover? or to find certainty of everlasting weal or woe in the undergoing or not undergoing of a

process called baptism? Is it reasonable to attach such frightful importance to the taking of cold baths; to the eating of yeast; to the wearing of artifical coverings upon the body of certain prescribed amplitude? or, as with the Pythagoreans, to the avoidance of beans? Does there appear to reside sufficient magic in the notion of homeopathy, or free-trade, or difference of skin color that men should be divided into enemy camps on the issue? But happily we are not here concerned to judge between the reasonable and the unreasonable. We are merely impartially occupied in noting ideas, particularly such ideas as appear to have been neglected. All the countless abhorrences and countless enthusiasms which have never yet been put forward as the basis of a philosophy of life we are privileged to look upon without obligation to ridicule. The possible "grouch" against language as the root of all evil may be thus coolly recognized. A philosophy of silence not for the few only but for all mankind would present some interesting problems and possess piquant implications. Quite as good a case could probably be made out for it as for the notion that machines are the chief ailment of the race which has recently been ingeniously propounded. Or a new variation upon the cry "back to nature" could be incorporated in the doctrine that in our far departure from the habits of our fishy ancestors lies the main cause of our degeneration; and that consequently life in the water, on the water, and under the water contains our sole hope of recovery. Islands, particularly small ones, either natural or artificial, would then receive a long-deferred but merited praise; and deep-sea divers would be the saints under the proposed regime. Land activities would be placed under a ban, and emphasis would be laid upon the possibilities of entirely new developments in the human constitution from an exclusive diet of sea-food in-

cluding sea-weed salads. Biologists would be consecrated to researches to determine the chance of an ultimate growth of fins and a scaly tail.

Then there are all the possible doctrines concerned with the problem of the main driving force that has directed human history. We have already had, of this group, the monistic theories of Marx, of Trotter, of Crile, of Nietzsche and the rest. But with the possible and partial exception of Bergson there is yet to appear a proponent of the view that the obsession for movement and for things moving is what has really determined the conduct of man and moulded human institutions. Such a theory would go far in explaining the vast preference for living things as opposed to the lifeless that is so common, and the immense preoccupation of mankind with the contrivance of mechanical devices for achieving more extreme degrees of rapidity. It would draw attention to the fact that nearly all forms of amusement are motor in character and supply ingenious patterns of motion or involve supreme efforts in the way of feats of speed. Finally it would stress the universally recognized fact that random movements including crawling are the earliest and predominant manifestations of life.

Similarly there is place for a philosophy of disgust to the effect that all motivation is negative rather than positive, that every activity is an avoidance, and that all ideals and theories of the good are merely disguised expressions of an immense loathing of something else. Likewise a philosophy of noise, not maintaining that it is either an evil or a good but only that it is the key to the mystery of organic evolution from its unpromising quiet beginnings in the slime to its present triumphant achievement of elevated trains, radio amplifiers, steel rivetings, grand operas, and political demonstrations. But we will not pause for this nor for the possibilities latent in the concept of laughter,

and in the secret fear of corpulence. We will pass on to an entirely different group of theories.

Glancing at the situation in which cosmologists are placed, we find that religion and philosophy between them appear to have pretty well exhausted the fundamental possibilities for guesses at the origin and the destination of the cosmos. There have been hypotheses of a beginning and of no beginning; of self-creation, of creation by some outside power, and of no creation. The postulated power in its turn has been interpreted as one, or as two, or as many; and as good, or a god, or as evil, a devil, according to the felt pleasantness or unpleasantness of life. While for the outcome of things there has been variously postulated a final running down, and nothingness; an everlasting progression without climax; a system of eternal repetitions of world cycles; and different kinds of consummation including a heaven, a hell or a purgatory, or combinations of these three. It is plain, of course, that the more detailed description alike of the process of the original coming to be; of the reason for that coming; and of the later stages of the world's and man's continuance have allowed and would allow for almost limitless play of logical ingenuity and creative imagination. The actual wealth of theologies with their wide range of concrete alternatives bears witness to this. And the actual theologies are probably scanty in comparison with the theologies that might have been, or that, in part at least, may still be. Even a monotheistic creed with its possible variations upon the notion of the goodness, power, intelligence, self-containedness, propensity to interfere with natural law, antiquity, and probable duration of a supreme being is capable of innumerable formulations, — or there could never have arisen in the course of human theologizing the differences of opinion that have arisen. For some people the main

purpose of a god is provision for the creation of the world. For others, the creative function is the only part of a god that they seriously object to. For some, the doctrine of divine omnipotence is the all-important tenet of faith; for others, it is the one dogma to be denied at all costs. But certainly the very interesting set of alternatives with respect to the notion of a god's duration have never been adequately played up, even if they have all been thought of: that, first, of his eternal existence, antedating that of the material universe; then, that of his beginning when the stuff of the natural world had its origin; then of his initiation at each of the successive crucial moments of the process of cosmic evolution: simultaneously with plant life, with animal life, with man; and finally, the idea of a beginning to occur some time in the future, as the final triumph of the whole cosmic process.

The other great cosmological issue is as to the ultimate substance or substances of the universe; and it may be sufficient to point out that while there have been monisms and dualisms repeatedly; an occasional three-fold and four-fold analysis, — as witness the theories of Hegel and Plotinus on the one hand, and on the other, Schopenhauer; and while there have been indeterminate pluralisms as well as many denials of any ultimate substance or substances whatsoever, the exploitation of the number 5 in this connection has been curiously neglected, as also that of higher numbers. Why should there not be flourishing cosmological *pentalisms*, the number 5 having already been singled out as possessing magical properties and as being significant in many ways? Still more is this the case with 7; but although there have been 7 deadly sins, and 7 virtues, 7 wonders of the world, and 7 days, and 7 angels having the 7 plagues and given the 7 golden vials, is there yet any analysis of reality into a 7-fold scheme, irreduce-

able, irrefragable, ultimate? To this suggestion it might be objected that at least it would stand very little chance of being true, being so obviously opposed to the principle of Occam's razor: — that the smaller the number of entities and principles one employs the nearer one approaches to validity. Now the traditional logics have, it is true, all been based upon this principle; so, unless one was contemplating the adoption of an unorthodox logic, it would seem that difficulties might ensue from a defiance of the axiom of simplicity.

But why not defy it, and accept all the unorthodox generous consequences that would follow? Why not adopt experimentally what we may call an axiom of complexity and the logic that goes with it? It would at least be interesting to experience an expectation always of more rather than of less, of maxima rather than of minima.

The mental set of an upholder of the axiom of complexity as worked out in cosmological speculation would be a cross between that of the monist and that of the pluralist. The prepossession in favor of muchness, of manyness, which characterizes the pluralistic outlook would be supplemented by the passion for the unconditioned which distinguishes the monistic temper. The outcome of this blend would be a doctrine of multiple absolutes, — a system that was centrifugal instead of centripetal. For this we can to a large degree find a parallel in Leibnitz. Indeed this particular kind of viewpoint is not unknown already in many kinds of speculation. Every pluralist who is not also a phenomenalist, every absolutist who is not also a monist, throws his weight at least slightly in the balance against Occam. But there are many applications of the heresy which have not been made explicit. From this standpoint infinitudes would wherever possible supplant otherwise preferred finitudes. Biologists, for example, might claim that

the novelty and apparent purposiveness of life and consciousness which seem to indicate some second kind of law or substance, could be adequately accounted for only by an infinite multiplication of the degrees or levels between the two extremes of the evolutionary series. For since there is qualitative difference between the infinite and any finite, however large, the gap in essence between the raw stuff of the non-living and the stuff of human consciousness might quite well be bridged by an infinity of steps between them, regardless of the minuteness and the brevity of those steps. This would, moreover, by no means conflict with, — rather, it would imply, — the uniqueness or qualitative absoluteness of the successive critical phases of the mutation process; for these in turn would involve groups of infinitely numerous gradations. In like manner psychologists under the influence of this way of thinking would not as now tend to postulate either a very few ultimate instincts, or deny the reality of instincts altogether, but would insist on the reality of a vast collection of congenital, hereditary drives as definite, distinct, and numerable as the handful of original impulses once admitted. And there would be no need for feats of compression and reduction. It would be a maximum number rather than a minimum of primary emotions, simple feelings, and irreduceable intellectual traits that would everywhere be sought for.

This then would be one kind of methodology which might supplant the usual one. Undoubtedly there are other possible methodologies quite as far-reaching in their immediate consequences.

Another rich mine of logical preoccupations is the problem of definition.

Now although definition is the prime instrument of logic, and although its successful use is a prerequisite for the building of any philosophy, it is a curious fact that some

philosophers have practically earned their philosophic reputation by their eloquent defences of the indefinability of one concept or another. A further extraordinary circumstance is the emotional kick that those philosophers themselves appear to get out of the solemn assertion of indefinability, and the amount of *kudos* their admirers feel called upon to accord them for their relegation of things to the limbo of the Inexpressible. The phenomenon would seem to indicate either a pretty general mystical and anti-intellectual sympathy; or else a peculiar klannish tendency on the part of most people to blind apostleship for a leader deigning to speak only in cryptic syllables. This latter is perhaps the explanation to choose, because an invariable accompaniment of the denial that a thing may be defined or its attributes known is a paradoxical implication of a very private and complete knowledge of the inmost essence of that thing on the part of the avowed agnostic. Indeed it may be questioned how a dogmatic denial of definability would be even possible apart from such a knowledge as would automatically render that denial fallacious.

Now it happens that frequent as are the declarations of indefinability, numberless notions have never yet been thus consecrated. We have been told that the good is thus distinguished; and God; and the soul. As also force, substance, personality, awareness, color, potentiality, causation and beauty. What opportunities for prophets of the unutterable remain as yet unused! One can foresee entire logical systems founded upon the assertion of the indefinability of hunger and thirst; of pain; of fragrance; of marriage, and motherhood, and health; of sanity and sleep and symbols. Best of all, of indefinability itself. The quarry for the earnest pursuer is not far to seek.

What practically amounts to an opposite undertaking is the investigation of concepts for the purpose of revealing

the layers upon layers of unsuspected significances hidden within. Philosophers in the past have not hesitated to dedicate their powers to the most formidable feats of excavation upon so simple and innocent-appearing notions as those rendered by the words "the" and "this." Indeed concepts of 3 and 4 letters are not the briefest that have been thus treated. Even the words "a" and "is" have so worked upon the feeling of analysts as to call forth extensive and devoted labors. And if "this" and "the" and "is" and "a," why not "where" and "why" and "me" and "you" and "at" and "when" and all the swarm of prepositions and conjunctions and adverbs and interjections? There never yet has been a whole volume, — nor even so far as we know an entire chapter, — devoted to the revelation of the inner essence of either "at" or " of." The thing, when one thinks of it, contains possibilities for the basis of a complete metaphysical system. If a "Philosophy of the *as if*" why not a "Philosophy of the *at*;" or "The Genesis and Implications of the *of*." Nor let the suggestion be taken in the spirit of levity, as was once done in an august assemblage when the assertion was quite seriously made that perhaps the most interesting and lasting contribution of one eminent modern philosopher was his acute analysis of the word "the." Even philosophers may sometimes be inclined to treat as trivial, topics of hidden but momentous consequence. But we must remember that the jests of today often become the religions of tomorrow, and try to render proper respect to the yet uncreated philosphies of unconsidered trifles.

We have in the foregoing pages been concerned with the possibilities of explicit enthusiasms and prejudices. It is important to note in this place that not avowed likes and dislikes only serve as the matrix of a man's metaphysical system, but that unavowed inclinations as well, and idio-

syncracies due to physiological or psychological defects may function in the same way. One is inclined, for example, to say that a remarkable strength of visual imagery in the case of Locke, and a remarkable weakness of such imagery in the case of Watson, was what was largely responsible for an outstanding characteristic of English empiricism on the one hand, and of behaviorism on the other. Unless a man did his thinking so exclusively in visual terms as to be led to identify visualizability and reality, how could he ever be tempted to deny the universal non-scalene, non-isosceles, non-rectangular, non-obtuse triangle on the ground that he failed to image such a monstrosity? And how could any one be led to glorify the kinaesthetic sensations of throat muscles unless he was very poverty-stricken and laboring under something of the limitations of a blind man, devoid of the experience of visual representation? But if peculiarities of the above kind could generate philosophical viewpoints what a wealth of unused doctrines must await the discovery of the lame and the halt and the otherwise imperfect. Every defect, like an unusual degree of laziness, or an exceptional sensitiveness to heat or cold, or a lack of auditory acuity; every peculiarity like a tendency to sleep-walking, or a weakness for bananas, or a fear of snakes, might quite well function in either one of two ways for the production of a philosophic dogma: either directly, by a simple glorification of the trait in question; or indirectly, in the manner made familiar to us through the teachings of the psycho-analysts, by an intricate process of reversal. The fact that testimony to an author's secret vices and virtues may be thus ambiguous, makes it of course perilous to dogmatize about his character on the sole basis of an inspection of his writings. How could one ever safely declare for example, whether the retailer of the episode of the temptation possessed a morbid passion for apples or

a morbid dislike for them? But at least one may say that here as elsewhere there must exist for the use of the simple-minded or of the psycho-analytical ample clues for the betrayal of the author.

In addition to the huge group of potential philosophies which depend for their individuality upon their employment of some hitherto unused stress, their exploiting of some hitherto neglected belief or disbelief, enthusiasm or aversion, there is another great class of systems consisting of old groupings of ideas but altered by the adding or the subtracting of a single doctrine, the changing of a single stress, the reversing of a single valuation. Think of the quite fresh perspective that is given to the voluntarism of Nietzsche by the substitution of pessimism for optimism as one of its elements. Or witness the variation of tone that creeps into the Freudian analysis of human nature according to whether one subjoins a Puritan or a hedonistic ethics. Or again merely drop God out of the epistemological argument of Berkeley and what saves him from the abysses of solipsism? The transformations that may follow a simple alteration in some one element of a philosophy are as magical as the transformations of a landscape when the light of early dawn yields to the full brilliance of noonday, or afternoon brightness fades into twilight. Still greater transformations one would of course anticipate from the change of more than one element; systems resulting from multiple changes might be expected to vary all the way from close kinship with the original system, to a remote resemblance.

Every philosophy then, written or unwritten, becomes the matrix of a whole fresh group of philosophies derivable from it by the simple process of altering in various ways its various elements. Coincident with the shifting of stress, the altering of perspective, the removing and the super-

imposing of components, there emanates from each such centre a kaleidescopic stream of outpouring systems. Starting from that centre one could pursue it through its Protean changes, follow its vagaries farther and farther afield, observe its derivatives of remoter and remoter degrees of relationship. To what? Where do we arrive if we pass continuously out from any philosophic point of reference as far as we can go? Why, at its antipodes, where is to be found its exact counterpart. For surely, whatever the nature of the space we as physical beings inhabit, the space we should have to traverse on that adventure could not be anything but Riemannian. For however numerous the possible degrees of dissimilarity from any system, they would necessarily be finite, so that somewhere the tracks of divergence would begin to draw together to meet again at the opposite pole from the starting place. But the number of such south poles would be as numerous as the systems from which one could take one's original departure, — would perhaps be infinite.

And so we come to the last strange group of unwritten philosophies, the ghostly assemblage of shadow antitheses. Just as for each affirmation, whether true or false, there is a nebulous second proposition, its negation, so for every group of propositions constituting a system there is another group, its perfect reversed image. And if we could gaze at once upon the entire vast galaxy of philosophies, taking in both those that have been found and named, and those that have never yet been sighted, shining like stars in the infinitely deep reaches of the sky, we should perceive also, inverted as in a glassy sea beneath, of each one its fully orbed reflection.

SUPPLEMENT

THE DEVELOPMENT OF AMERICAN PRAGMATISM

JOHN DEWEY

Translated from the French in the Special American Number of the *Revue de Métaphysique et de Morale*, vol. 29, no. 4, Oct. 1922, pp 411-430.

THE DEVELOPMENT OF AMERICAN PRAGMATISM

JOHN DEWEY

The purpose of this article is to define the principal theories of the philosophical movements known under the names of Pragmatism, Instrumentalism, or Experimentalism. To do this we must trace their historical development; for this method seems to present the simplest way of comprehending these movements and at the same time avoids certain current misunderstandings of their doctrines and of their aims.

The origin of Pragmatism goes back to Charles Sanders Peirce, the son of one of the most celebrated mathematicians of the United States, and himself very proficient in the science of mathematics; he is one of the founders of the modern symbolic logic of relations. Unfortunately Peirce was not at all a systematic writer and never expounded his ideas in a single system. The pragmatic method which he developed applies only to a very narrow and limited universe of discourse. After William James had extended the scope of the method, Peirce wrote an exposition of the origin of pragmatism as he had first conceived it; it is from this exposition that we take the following passages.

The term "pragmatic," contrary to the opinion of those who regard pragmatism as an exclusively American conception, was suggested to him by the study of Kant. In the "Metaphysic of Morals" Kant established a distinction between *pragmatic* and *practical.* The latter term applies to moral laws which Kant regards as *a priori,* whereas the former term applies to the rules of art and technique which

are based on experience and are applicable to experience. Peirce, who was an empiricist, with the habits of mind, as he put it, of the laboratory, consequently refused to call his system "practicalism," as some of his friends suggested. As a logician he was interested in the art and technique of real thinking, and especially as far as pragmatic method is concerned in the art of making concepts clear, or of construing adequate and effective definitions in accord with the spirit of scientific method.

Following his own words, for a person "who still thought in Kantian terms most readily, '*praktisch*' and '*pragmatisch*' were as far apart as the two poles; the former belonging in a region of thought where no mind of the experimental type can ever make sure of solid ground under his feet, the latter expressing relation to some definite human purpose. Now quite the most striking feature of the new theory was its recognition of an inseparable connection between rational cognition and rational purpose."[1]

In alluding to the experimental type of mind, we are brought to the exact meaning given by Peirce to the word "pragmatic." In speaking of an experimentalist as a man whose intelligence is formed in the laboratory, he said: "Whatever assertion you may make to him, he will either understand as meaning that if a given prescription for an experiment ever can be and ever is carried out in act, an experience of a given description will result, else he will see no sense at all in what you say." And thus Peirce developed the theory that "the rational purport of a word or other expression, lies exclusively in its conceivable bearing upon the conduct of life; so that, since obviously nothing that might not result from experiment can have any direct bearing upon conduct, if one can define accurately

[1] *Monist*, vol. 15, p. 163.

all the conceivable experimental phenomena which the affirmation or denial of a concept could imply, one will have therein a complete definition of the concept.'' [2]

The essay in which Peirce developed his theory bears the title: *How to make our Ideas Clear.*[3] There is a remarkable similarity here to Kant's doctrine in the efforts which he made to interpret the universality of concepts in the domain of experience in the same way in which Kant established the law of practical reason in the domain of the *a priori.* ''The rational meaning of every proposition lies in the future. . . . But of the myriads of forms into which a proposition may be translated, what is that one which is to be called its very meaning? It is, according to the pragmatist, that form in which the proposition becomes applicable to human conduct, not in these or those special circumstances, nor when one entertains this or that special design, but that form which is most directly applicable to self-control under every situation, and to every purpose.'' [4] So also, ''the pragmatist does not make the *summum bonum* to consist in action, but makes it to consist in that process of evolution whereby the existent comes more and more to embody generals . . . '' [5]— in other words — the process whereby the existent becomes, with the aid of action, a body of rational tendencies or of habits generalized as much as possible. These statements of Peirce are quite conclusive with respect to two errors which are commonly committed in regard to the ideas of the founder of pragmatism. It is often said of pragmatism that it makes action the end of life. It is also said of pragmatism that it subordinates thought and rational activity to particular ends of interest and profit. It is true that the theory

2 *Monist,* vol. 15, p. 162.
3 *Popular Science Monthly,* 1878.
4 *Monist,* vol. 15, pp. 173-4.
5 *Monist,* vol. 15, p. 178.

according to Peirce's conception implies essentially a certain relation to action, to human conduct. But the rôle of action is that of an intermediary. In order to be able to attribute a meaning to concepts, one must be able to apply them to existence. Now it is by means of action that this application is made possible. And the modification of existence which results from this application constitutes the true meaning of concepts.

Pragmatism is, therefore, far from being that glorification of action for its own sake which is regarded as the peculiar characteristic of American life. It is also to be noted that there is a scale of possible applications of concepts to existence, and hence a diversity of meanings. The greater the extension of the concepts, the more they are freed from the restrictions which limit them to particular cases, the more is it possible for us to attribute the most general meaning to a term. Thus the theory of Peirce is opposed to every restriction of the meaning of a concept to the achievement of a particular end, and still more to a personal aim. It is still more strongly opposed to the idea that reason or thought should be reduced to being a servant of any interest which is pecuniary or too narrow. This theory was American in its origin in so far as it insisted on the necessity of human conduct and the fulfillment of some aim in order to clarify thought. But at the same time, it disapproves of those aspects of American life which make action an end in itself, and which conceive ends too narrowly and too practically. In considering a system of philosophy in its relation to national factors it is necessary to keep in mind not only the aspects of life which are incorporated in the system, but also the aspects against which the system is a protest. There never was a philosopher who has merited the name for the simple reason that he glorified the tendencies and characteristics of his social

environment; just as it is also true that there never has been a philosopher who has not seized upon certain aspects of the life of his time and idealized them.

The work commenced by Peirce was continued by William James. In one sense James narrowed the application of Peirce's pragmatic method, but at the same time he extended it. The articles which Peirce wrote in 1878 commanded almost no attention from philosophical circles, which were then under the dominating influence of the neokantian idealism of Green, of Caird, and of the Oxford School, excepting those circles in which the Scottish philosophy of common sense maintained its supremacy. In 1898 James inaugurated the new pragmatic movement in an address entitled, *"Philosophical Conceptions and Practical Results,"* later reprinted in the volume, *"Collected Essays and Reviews."* Even in this early study one can easily notice the presence of those two tendencies to restrict and at the same time to extend early pragmatism. After having quoted the psychological remark of Peirce that "beliefs are really rules for action, and the whole function of thinking is but one step in the production of habits of action," and that every idea which we frame for ourselves of an object is really an idea of the possible effects of that object, he expressed the opinion that all these principles could be expressed more broadly than Peirce expressed them. "The ultimate test for us of what a truth means is indeed the conduct it dictates or inspires. But it inspires that conduct because it first foretells some particular turn to our experience which shall call for just that conduct from us. And I should prefer to express Peirce's principle by saying that the effective meaning of any philosophic proposition can always be brought down to some particular consequence, in our future practical experience, whether active or passive; the point lying rather in the fact that the ex-

perience must be particular, than in the fact that it must be active.''[6] In an essay written in 1908 James repeats this statement and states that whenever he employs the term ''the practical,'' he means by it, ''the distinctively concrete, the individual, the particular and effective as opposed to the abstract, general and inert — 'Pragmata' are things in their plurality — particular consequences can perfectly well be of a theoretic nature.''[7] [8]

William James alluded to the development which he gave to Peirce's expression of the principle. In one sense one can say that he enlarged the bearing of the principle by the substitution of particular consequences for the general rule or method applicable to future experience. But in another sense this substitution limited the application of the principle since it destroyed the importance attached by Peirce to the greatest possible application of the rule, or the habit of conduct — its extension to universality. That is to say, William James was much more of a nominalist than Peirce.

One can notice an extension of pragmatism in the above passage. James there alludes to the use of a method of determining the meaning of truth. Since truth is a term and has consequently a meaning, this extension is a legit-

6 *Collected Essays and Reviews*, p. 412.

7 *The Meaning of Truth*, pp. 209-210.

8 In a footnote James gave an example of the errors which are committed in connection with the term "Practical," quoting M. Bourdeau who had written that "Pragmatism is an Anglo Saxon reaction against the intellectualism and rationalism of the Latin mind. . . . It is a philosophy without words, a philosophy of gestures and of facts, which abandons what is general and holds only to what is particular." In his lecture at California, James brought out the idea that his pragmatism was inspired to a considerable extent by the thought of the British philosophers, Locke, Berkeley, Hume, Mill, Bain, and Shadworth Hodgson. But he contrasted this method with German transcendentalism, and particularly with that of Kant. It is especially interesting to notice this difference between Peirce and James: the former attempted to give an experimental, not an *a priori* explanation of Kant, whereas James tried to develop the point of view of the British thinkers.

imate application of pragmatic method. But it should be remarked that here this method serves only to make clear the meaning of the term, and has nothing to do with the truth of a particular judgment. The principal reason which led James to give a new color to pragmatic method was that he was preoccupied with applying the method to determine the meaning of philosophical problems and questions and that moreover, he chose to submit to examination philosophical notions of a theological or religious nature. He wished to establish a criterion which would enable one to determine whether a given philosophical question has an authentic and vital meaning or whether, on the contrary, it was trivial and purely verbal; and in the former case, what interests were at stake, when one accepts and affirms one or the other of two theses in dispute. Peirce was above all a logician; whereas James was an educator and wished to force the general public to realize that certain problems, certain philosophical debates have a real importance for mankind, because the beliefs which they bring into play lead to very different modes of conduct. If this important distinction is not grasped, it is impossible to understand the majority of the ambiguities and errors which belong to the later period in the pragmatic movement.

James took as an example the controversy between theism and materialism. It follows from this principle that if the course of the world is considered as completed, it is equally legitimate to assert that God or matter was its cause. Whether one way or the other, the facts are what they are, and it is they which determine whatever meaning is to be given to their cause. Consequently the name which we can give to this cause is entirely arbitrary. It is entirely different if we take the future into account. God then has the meaning of a power concerned with assuring the final triumph of ideal and spiritual values, and matter becomes

a power indifferent to the triumph or defeat of these values. And our life takes a different direction according as we adopt one or the other of these alternatives. In the lectures on pragmatism published in 1907, he applies the same criticism to the philosophical problem of the One and the Many, that is to say of Monism and Pluralism, as well as to other questions. Thus he shows that Monism is equivalent to a rigid universe where everything is fixed and immutably united to others, where indetermination, free choice, novelty, and the unforeseen in experience have no place; a universe which demands the sacrifice of the concrete and complex diversity of things to the simplicity and nobility of an architectural structure. In what concerns our beliefs, Monism demands a rationalistic temperament leading to a fixed and dogmatic attitude. Pluralism, on the other hand, leaves room for contingence, liberty, novelty, and gives complete liberty of action to the empirical method, which can be greatly extended. It accepts unity where it finds it, but it does not attempt to force the vast diversity of events and things into a single rational mold.

From the point of view of an educator or of a student or, if you will, of those who are thoroughly interested in these problems, in philosophical discussions and controversies, there is no reason for contesting the value of this application of pragmatic method, but it is no less important to determine the nature of this application. It affords a means of discovering the implications for human life of philosophical conceptions which are often treated as of no importance and of a purely dialectical nature. It furnishes a criterion for determining the vital implications of beliefs which present themselves as alternatives in any theory. Thus as he himself said, "the whole function of philosophy ought to be to find the characteristic influences which you and I would undergo at a determinate moment

of our lives, if one or the other formula of the universe were true.'' However, in saying that the whole function of philosophy has this aim, it seems that he is referring rather to the teaching than to the construction of philosophy. For such a statement implies that the world formulas have already all been made, and that the necessary work of producing them has already been finished, so that there remains only to define the consequences which are reflected in life by the acceptance of one or the other of these formulas as true.

From the point of view of Peirce, the object of philosophy would be rather to give a fixed meaning to the universe by formulas which correspond to our attitudes or our most general habits of response to the environment; and this generality depends on the extension of the applicability of these formulas to specific future events. The meaning of concepts of ''matter'' and of ''God'' must be fixed before we can even attempt to reach an understanding concerning the value of our belief in these terms. Materialism would signify that the world demands on our part a single kind of constant and general habits; and God would signify the demand for another type of habits; the difference between materialism and theism would be tantamount to the difference in the habits required to face all the detailed facts of the universe. The world would be one in so far as it would be possible for us to form a single habit of action which would take account of all future existences and would be applicable to them. It would be many in so far as it is necessary for us to form several habits, differing from each other and irreducible to each other, in order to be able to meet the events in the world and control them. In short, Peirce wrote as a logician and James as a humanist.

William James accomplished a new advance in Pragmat-

ism by his theory of the will to believe, or as he himself later called it, the right to believe. The discovery of the fundamental consequences of one or another belief has without fail a certain influence on that belief itself. If a man cherished novelty, risk, opportunity and a variegated esthetic reality, he will certainly reject any belief in Monism, when he clearly perceives the import of this system. But if, from the very start, he is attracted by esthetic harmony, classic proportions, fixity even to the extent of absolute security and logical coherence, it is quite natural that he should put faith in Monism. Thus William James took into account those motives of instinctive sympathy which play a greater rôle in our choice of a philosophic system than formal reasonings; and he thought that we would be rendering a service to the cause of philosophical sincerity if we would openly recognize the motives which inspire us. He also maintained the thesis that the greater part of philosophic problems and especially those which touch on religious fields are of such a nature that they are not susceptible of decisive evidence one way or the other. Consequently he claimed the right of a man to choose his beliefs not only in the presence of proofs or conclusive facts, but also in the absence of all evidence of this nature, and above all when he is forced to choose between one meaning or another, or when by refusing to choose, his refusal is itself equivalent to a choice. The theory of the will to believe gives rise to misunderstandings and even to ridicule; and therefore it is necessary to understand clearly in what way James used it. We are always obliged to act in any case; our actions and with them their consequences actually change according to the beliefs which we have chosen. Moreover it may be that, in order to discover the proofs which will ultimately be the intellectual justification of certain beliefs — the belief in freedom, for example, or

the belief in God — it is necessary to begin to act in accordance with this belief.

In his lectures on Pragmatism, and in his volume of essays bearing the title "*The Meaning of Truth*," which appeared in 1909, James extended the use of the pragmatic method to the problem of the nature of truth. So far we have considered the pragmatic method as an instrument in determining the meaning of words and the vital importance of philosophic beliefs. Now and then we have made allusion to the future consequences which are implied. James showed, among other things, that in certain philosophic conceptions, the affirmation of certain beliefs could be justified by means of the nature of their consequences, or by the differences which these beliefs make in existence. But then why not push the argument to the point of maintaining that the meaning of truth in general is determined by its consequences? We must not forget here that James was an empiricist before he was a pragmatist, and repeatedly stated that pragmatism is merely empiricism pushed to its legitimate conclusions. From a general point of view, the pragmatic attitude consists in "looking away from first things, principles, 'categories,' supposed necessities; and of looking towards last things, fruits, consequences, facts." It is only one step further to apply the pragmatic method to the problem of truth. In the natural sciences there is a tendency to identify truth in any particular case with a verification. The verification of a theory, or of a concept, is carried on by the observation of particular facts. Even the most scientific and harmonious physical theory is merely an hypothesis until its implications, deduced by mathematical resasoning or by any other kind of inference, are verified by observed facts. What direction therefore, must an empirical philosopher take who wishes to arrive at a definition of truth by means of an em-

pirical method? He must, if he wants to apply this method, and without bringing in for the present the pragmatic formula, first find particular cases from which he then generalizes. It is therefore in submitting conceptions to the control of experience, in the process of verifying them, that one finds examples of what is called truth. Therefore the philosopher who applies this empirical method, without the least prejudice in favor of pragmatic doctrine, can be brought to conclude that truth "means" verification, or if one prefers, that verification either actual or possible, is the definition of truth.

In combining this conception of empirical method with the theory of pragmatism, we come upon other important philosophical results. The classic theories of truth in terms of the coherence or compatibility of terms, and of the correspondence of an idea with a thing, hereby receive a new interpretation. A merely mental coherence without experimental verification does not enable us to get beyond the realm of hypothesis. If a notion or a theory makes pretense of corresponding to reality or to the facts, this pretense cannot be put to the test and confirmed or refuted except by causing it to pass over into the realm of action and by noting the results which it yields in the form of the concrete observable facts to which this notion or theory leads. If, in acting upon this notion, we are brought to the fact which it implies or which it demands, then this notion is true. A theory corresponds to the facts because it leads to the facts which are its consequences, by the intermediary of experience. And from this consideration the pragmatic generalization is drawn that all knowledge is prospective in its results, except in the case where notions and theories after having been first prospective in their application, have already been tried out and verified.

Theoretically, however, even such verifications or truths could not be absolute. They would be based upon practical or moral certainty, but they are always subject to being corrected by unforeseen future consequences or by observed facts which had been disregarded. Every proposition concerning truths is really in the last analysis hypothetical and provisional, although a large number of these propositions have been so frequently verified without fail that we are justified in using them as if they were absolutely true. But logically absolute truth is an ideal which cannot be realized, at least not until all the facts have been registered, or as James says "bagged," and until it is no longer possible to make other observations and other experiences.

Pragmatism, thus, presents itself as an extension of historical empiricism with this fundamental difference, that it does not insist upon antecedent phenomena but upon consequent phenomena; not upon the precedents but upon the possibilities of action, and this change in point of view is almost revolutionary in its consequences. An empiricism which is content with repeating facts already past has no place for possibility and for liberty. It cannot find room for general conceptions or ideas, at least no more than to consider them as summaries or records. But when we take the point of view of pragmatism we see that general ideas have a very different rôle to play than that of reporting and registering past experiences. They are the bases for organizing future observations and experiences. Whereas, for empiricism, in a world already constructed and determined, reason or general thought has no other meaning than that of summing up particular cases, in a world where the future is not a mere word, where theories, general notions, rational ideas have consequences for action, reason necessarily has a constructive function. Nevertheless the

conceptions of reasoning have only a secondary interest in comparison with the reality of facts, since they must be confronted with concrete observations.[9]

Pragmatism thus has a metaphysical implication. The doctrine of the value of consequences leads us to take the future into consideration. And this taking into consideration of the future takes us to the conception of a universe whose evolution is not finished, of a universe which is still, in James' term, "in the making," "in the process of becoming," of a universe up to a certain point still plastic.

Consequently reason, or thought, in its more general sense, has a real, though limited function, a creative, constructive function. If we form general ideas and if we put them in action, consequences are produced which could not be produced otherwise. Under these conditions the world will be different from what it would have been if thought had not intervened. This consideration confirms the human and moral importance of thought and of its reflective operation in experience. It is therefore not true to say that James treated reason, thought and knowledge with contempt, or that he regarded them as mere means of gaining personal or even social profits. For him reason has a creative function, limited because specific, which helps to make the world other than it would have been without it. It makes the world really more reasonable; it gives to it an intrinsic value. One will understand the philosophy of James better if one considers it in its totality as a revision of English empiricism, a revision which replaces the value

9 William James said in a happy metaphor, that they must be "cashed in," by producing specific consequences. This expression means that they must be able to become concrete facts. But for those who are not familiar with American idioms, James' formula was taken to mean that the consequences themselves of our rational conceptions must be narrowly limited by their pecuniary value. Thus Mr. Bertrand Russell wrote just recently that pragmatism is merely a manifestation of American commercialism.

of past experience, of what is already given, by the future, by that which is mere possibility.

These considerations naturally bring us to the movement called instrumentalism. The survey which we have just made of James' philosophy shows that he regarded conceptions and theories purely as instruments which can serve to constitute future facts in a specific manner. But James devoted himself primarily to the moral aspects of this theory, to the support which it gave to "meliorism" and moral idealism, and to the consequences which followed from it concerning the sentimental value and the bearing of various philosophical systems, particularly to its destructive implications for monistic rationalism and for absolutism in all its forms. He never attempted to develop a complete theory of the forms or "structures" and of the logical operations which are founded on this conception. Instrumentalism is an attempt to constitute a precise logical theory of concepts, of judgments and inferences in their various forms, by considering primarily how thought functions in the experimental determinations of future consequences. That is to say, that it attempts to establish universally recognized distinctions and rules of logic by deriving them from the reconstructive or mediative function ascribed to reason. It aims to constitute a theory of the general forms of conception and reasoning, and not of this or that particular judgment or concept related to its own content, or to its particular implications.

As far as the historical antecedents of instrumentalism are concerned, two factors are particularly important, over and above this matter of experimental verification which we have already mentioned in connection with James. The first of these two factors is psychological, and the second is a critique of the theory of knowledge and of logic which

has resulted from the theory proposed by neo-kantian idealism and expounded in the logical writings of such philosophers as Lotze, Bosanquet, and F. H. Bradley. As we have already said, neo-kantian influence was very marked in the United States during the last decade of the nineteenth century. I myself, and those who have collaborated with me in the exposition of instrumentalism, began by being neo-kantians, in the same way that Peirce's point of departure was kantianism and that of James was the empiricism of the British School.

The psychological tendencies which have exerted an influence on instrumentalism are of a biological rather than a physiological nature. They are closely related to the important movement whose promoter in psychology has been Doctor John Watson and to which he has given the name of Behaviourism. Briefly, the point of departure of this theory is the conception of the brain as an organ for the co-ordination of sense stimuli (to which one should add modifications caused by habit, unconscious memory, or what are called today "conditioned reflexes") for the purpose of effecting appropriate motor responses. On the basis of the theory of organic evolution it is maintained that the analysis of intelligence and of its operations should be compatible with the order of known biological facts, concerning the intermediate position occupied by the central nervous system in making possible responses to the environment adequate to the needs of the living organism. It is particularly interesting to note that in the "Studies in Logical Theory" (1903), which was their first declaration, the instrumentalists recognized how much they owed to William James for having forged the instruments which they used, while at the same time, in the course of the studies, the authors constantly declared their belief in a close union of the "normative" principles of logic and the

real processes of thought, in so far as these are determined by an objective or biological psychology and not by an introspective psychology of states of consciousness. But it is curious to note that the "instruments" to which allusion is made, are not the considerations which were of the greatest service to James. They precede his pragmatism and it is in one of the aspects of his "Principles of Psychology" that one must look for them. This important work (1890) really developed two distinct theses.

The one is a re-interpretation of introspective psychology, in which James denies that sensations, images and ideas are discreet and in which he replaces them by a continuous stream which he calls "the stream of consciousness." This conception necessitates a consideration of relations as an immediate part of the field of consciousness, having the same status as qualities. And throughout his "Psychology" James gives a philosophical tinge to this conception by using it in criticising the atomism of Locke and of Hume as well as the a-priorism of the synthesis of rational principles by Kant and his successors, among whom should be mentioned in England, Thomas Hill Green, who was then at the height of his influence.

The other aspect of his "Principles of Psychology" is of a biological nature. It shows itself in its full force in the criterion which James established for discovering the existence of mind. "The pursuance of future ends and the choice of means for their attainment are thus the mark and criterion of the presence of mentality in a phenomenon."[10] The force of this criterion is plainly shown in the chapter on Attention, and its relation to Interest considered as the force which controls it, and its teleological function of selection and integration; in the chapter on Discrimination and Comparison (Analysis and Abstrac-

[10] *Psychology*, vol. I, p. 8.

tion), where he discusses the way in which ends to be attained and the means for attaining them evoke and control intellectual analysis; and in the chapter on Conception, where he shows that a general idea is a mode of signifying particular things and not merely an abstraction from particular cases or a super-empirical function, — that it is a teleological instrument. James then develops this idea in the chapter on reasoning where he says that "the only meaning of essence is teleological, and that classification and conception are purely teleological weapons of mind."

One might complete this brief enumeration by mentioning also the chapter of James' book in which he discusses the Nature of Necessary Truths and the Rôle of Experience, and affirms in opposition to Herbert Spencer, that many of our most important modes of perception and conception of the world of sensible objects are not the cumulative products of particular experience, but rather original biological sports, spontaneous variations which are maintained because of their applicability to concrete experiences after once having been created. Number, space, time, resemblance and other important "categories" could have been brought into existence, he says, as a consequence of some particular cerebral instability, but they could by no means, have been registered by the mind under some outside influence. Many significant and useless concepts also arise in the same manner. But the fundamental categories have been cumulatively extended and reinforced because of their value when applied to concrete instances and things of experience. It is therefore not the origin of a concept, it is its application which becomes the criterion of its value; and here we have the whole of pragmatism in embryo. A phrase of James' very well summarizes its import: "the popular notion that 'Science' is forced on the mind *ab*

extra, and that our interests have nothing to do with its constructions, is utterly absurd.''

Given the point of view which we have just specified, and the interest attaching to a logical theory of conception and judgment, there results a theory of the following description. The adaptations made by inferior organisms, for example their effective and co-ordinated responses to stimuli, become teleological in man and therefore give occasion to thought. Reflection is an indirect response to the environment, and the element of indirection can itself become great and very complicated. But it has its origin in biological adaptive behaviour and its ultimate function in its cognitive aspect is a prospective control of the conditions of its environment. The function of intelligence is therefore not that of copying the objects of the environment, but rather of taking account of the way in which more effective and more profitable relations with these objects may be established in the future.

How this point of view has been applied to the theory of judgment is too long a story to be told here. We shall confine ourselves here to saying that, in general, the ''subject'' of a judgment represents that portion of the environment to which a reaction must be made; the attribute represents the corresponding response or the habit or the manner in which one must behave towards the environment; the copula represents the organic and concrete act by which the connection is made between the fact and its signification; and finally the conclusion, or the definitive object of judgment, is simply the same situation transformed, a situation which implies a change as well in the original subject (including its mind) as in the environment itself. The new and harmonious unity thus attained verifies the bearing of the data which were at first chosen to serve as

subject and of the concepts introduced into the situation during the process as teleological instruments for its elaboration. Until this final unification is attained the perceptual data and the conceptual principles, theories, are merely hypotheses from a logical point of view. Moreover, affirmation and negation are intrinsically a-logical: they are acts.

Such a summary survey can hardly pretend to be either convincing or suggestive. However, in noting the points of resemblance and difference between this phase of pragmatism and the logic of neo-hegelian idealism, we are bringing out a point of great importance. According to the latter logic, thought constitutes in the last analysis its own object and even the universe. It is possible to affirm the existence of a series of forms of judgment, because our first judgments, which are nearest to sense, succeed in constituting objects in only a partial and fragmentary fashion, even to the extent of involving in their nature an element of contradiction. There results a dialectic which permits each inferior and partial type of judgment to pass into a more complete form until we finally arrive at the total judgment where the thought which comprehends the entire object or the universe as an organic whole of interrelated mental distinctions. It is evident that this theory magnifies the rôle of thought beyond all proportion. It is an objective and rational idealism which is opposed to and distinct from the subjective and perceptual idealism of Berkeley's school. Instrumentalism, however, assigns a positive function to thought, that of reconstituting the present stage of things instead of merely knowing them. As a consequence, there cannot be intrinsic degrees, or a hierarchy of forms of judgment. Each type has its own end, and its validity is entirely determined by its efficacy in the pursuit of its end. A limited perceptual judgment,

adapted to the situation which has given it birth, is as true as is the most complete and significant philosophic or scientific judgment in its place. Logic, therefore, leads to a realistic metaphysics in so far as it accepts facts and events for what they are independently of thought, and to an idealistic metaphysics in so far as it contends that thought gives birth to distinctive acts which modify future facts and events in such a way as to render them more reasonable, that is to say, more adequate to the ends which we propose for ourselves. The ideal element is more accentuated by the inclusion progressively of social factors in human environment over and above natural factors; so that the needs which are fulfilled, the ends which are attained are no longer of a merely biological or particular character, but include also the ends and activities of other members of society.

It is natural that continental thinkers should be interested in American philosophy as it reflects, in a certain sense, American life. Thus it is clear after this rapid survey of the history of pragmatism that American thought merely continues European thought. We have imported our language, our laws, our institutions, our morals, and our religion from Europe, and we have adapted them to the new conditions of our life. The same is true of our ideas. For long years our philosophical thought was merely an echo of European thought. The pragmatic movement which we have traced in the present essay as well as neo-realism, behaviourism, the absolute idealism of Royce, the naturalistic idealism of Santayana, are all attempts at re-adaptation; but they are not creations *de novo*. They have their roots in British and European thought. Since these systems are re-adaptations they take into consideration the distinctive traits of the environment of American life. But as has already been said, they are not limited

to reproducing what is worn and imperfect in this environment. They do not aim to glorify the energy and the love of action which the new conditions of American life exaggerated. They do not reflect the excessive mercantilism of American life. Without doubt all these traits of the environment have not been without a certain influence on American philosophical thought; our philosophy would not be national or spontaneous if it were not subject to this influence. But the fundamental idea which the movements of which we have just spoken, have attempted to express, is the idea that action and opportunity justify themselves only to the degree in which they render life more reasonable and increase its value. Instrumentalism maintains in opposition to many contrary tendencies in the American environment, that action should be intelligent and reflective, and that thought should occupy a central position in life. That is the reason for our insistence on the teleological phase of thought and knowledge. If it must be teleological in particular and not merely true in the abstract, that is probably due to the practical element which is found in all the phases of American life. However that may be, what we insist upon above all else is that intelligence be regarded as the only source and sole guarantee of a desirable and happy future. It is beyond doubt that the progressive and unstable character of American life and civilization has facilitated the birth of a philosophy which regards the world as being in continuous formation, where there is still place for indeterminism, for the new and for a real future. But this idea is not exclusively American, although the conditions of American life have aided this idea in becoming self-conscious. It is also true that Americans tend to underestimate the value of tradition and of rationality considered as an achievement of the past. But the world has also given proof of irrationality in the past and

this irrationality is incorporated in our beliefs and our institutions. There are bad traditions as there are good ones: it is always important to distinguish. Our neglect of the traditions of the past, with whatever this negligence implies in the way of spiritual impoverishment of our life, has its compensation in the idea that the world is re-commencing and being re-made under our eyes. The future as well as the past can be a source of interest and consolation and give meaning to the present. Pragmatism and instrumental experimentalism bring into prominence the importance of the individual. It is he who is the carrier of creative thought, the author of action, and of its application. Subjectivism is an old story in philosophy; a story which began in Europe and not in America. But American philosophy, in the systems which we have expounded, has given to the subject, to the individual mind, a practical rather than an epistemological function. The individual mind is important because only the individual mind is the organ of modifications in traditions and institutions, the vehicle of experimental creation. One-sided and egoistic individualism in American life has left its imprint in our thought. For better or for worse, depending on the point of view, it has transformed the esthetic and fixed individualism of the old European culture into an active individualism. But the idea of a society of individuals is not foreign to American thought; it penetrates even our current individualism which is unreflective and brutal. And the individual which American thought idealises is not an individual *per se*, an individual fixed in isolation and set up for himself, but an individual who evolves and develops in a natural and human environment, an individual who can be educated.

If I were asked to give an historical parallel to this movement in American thought I would remind my reader

of the French philosophy of the enlightenment. Every one knows that the thinkers who made that movement illustrious were inspired by Bacon, Locke, and Newton; what interested them was the application of scientific method and of the conclusions of an experimental theory of knowledge to human affairs, the critique and reconstruction of beliefs and institutions. As Höffding writes, they were animated "by a fervent faith in intelligence, progress, and humanity." And certainly they are not accused today, just because of their educational and social significance, of having sought to subordinate intelligence and science to ordinary utilitarian aims. They merely sought to free intelligence from its impurities and to render it sovereign. One can scarcely say that those who glorify intelligence and reason in the abstract, because of their value for those who find personal satisfaction in their possession, estimate intelligence more truly than those who wish to make it the sole and indispensable guide of intellectual and social life. When an American critic says of instrumentalism that it regards ideas as mere servants which make for success in life, he need only react, without reflection, on the ordinary verbal associations of the word "instrumental," as many others have reacted in the same manner to the use of the word "practical." Similarly a recent Italian writer after having said that pragmatism and instrumentalism are characteristic products of American thought, adds that these systems "regard intelligence as a mere mechanism of belief, and consequently attempt to reestablish the dignity of reason by making of it a machine for the production of beliefs useful to morals and society." This criticism does not hold. It is by no means the production of beliefs useful to morals and society which these systems pursue, but it is the formation of a faith in intelligence, as the one and indispensable belief necessary to

moral and social life. The more one appreciates the intrinsic esthetic, immediate value of thought and of science, the more one takes into account what intelligence itself adds to the joy and dignity of life, the more one should feel grieved at a situation in which the exercise and joy of reason are limited to a narrow, closed and technical social group and the more one should ask how it is possible to make all participators in this inestimable wealth.

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